

## CHAPTER 4

### POINT AND NONPOINT SOURCE CHARACTERIZATION OF THE OBION RIVER (SOUTH FORK) WATERSHED

#### 4.1 Background.

#### 4.2. Characterization of HUC-12 Subwatersheds

- 4.2.A. 080102030101 (Beaver Creek)
- 4.2.B. 080102030102 (South Fork Obion River)
- 4.2.C. 080102030103 (South Fork Obion River)
- 4.2.D. 080102030104 (Reedy Creek)
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- 4.2.F. 080102030106 (South Fork Obion River)
- 4.2.G. 080102030201 (Crooked Creek)
- 4.2.H. 080102030202 (Guins Creek)
- 4.2.I. 080102030301 (Middle Fork Obion River)
- 4.2.J. 080102030302 (Middle Fork Obion River)
- 4.2.K. 080102030303 (Middle Fork Obion River)
- 4.2.L. 080102030304 (Thompson Creek)
- 4.2.M. 080102030305 (Middle Fork Obion River)
- 4.2.N. 080102030401 (Spring Creek, Upper)
- 4.2.O. 080102030402 (Spring Creek, Lower)
- 4.2.P. 080102030501 (Mud Creek, Upper)
- 4.2.Q. 080102030502 (Mud Creek, Lower)
- 4.2.R. 080102030503 (Cane Creek)
- 4.2.S. 080102030601 (Rutherford Fork Obion River)
- 4.2.T. 080102030602 (Rutherford Fork Obion River)
- 4.2.U. 080102030603 (Rutherford Fork Obion River)
- 4.2.V. 080102030604 (Wolf Creek)
- 4.2.W. 080102030605 (Rutherford Fork Obion River)
- 4.2.X. 080102030606 (Rutherford Fork Obion River)

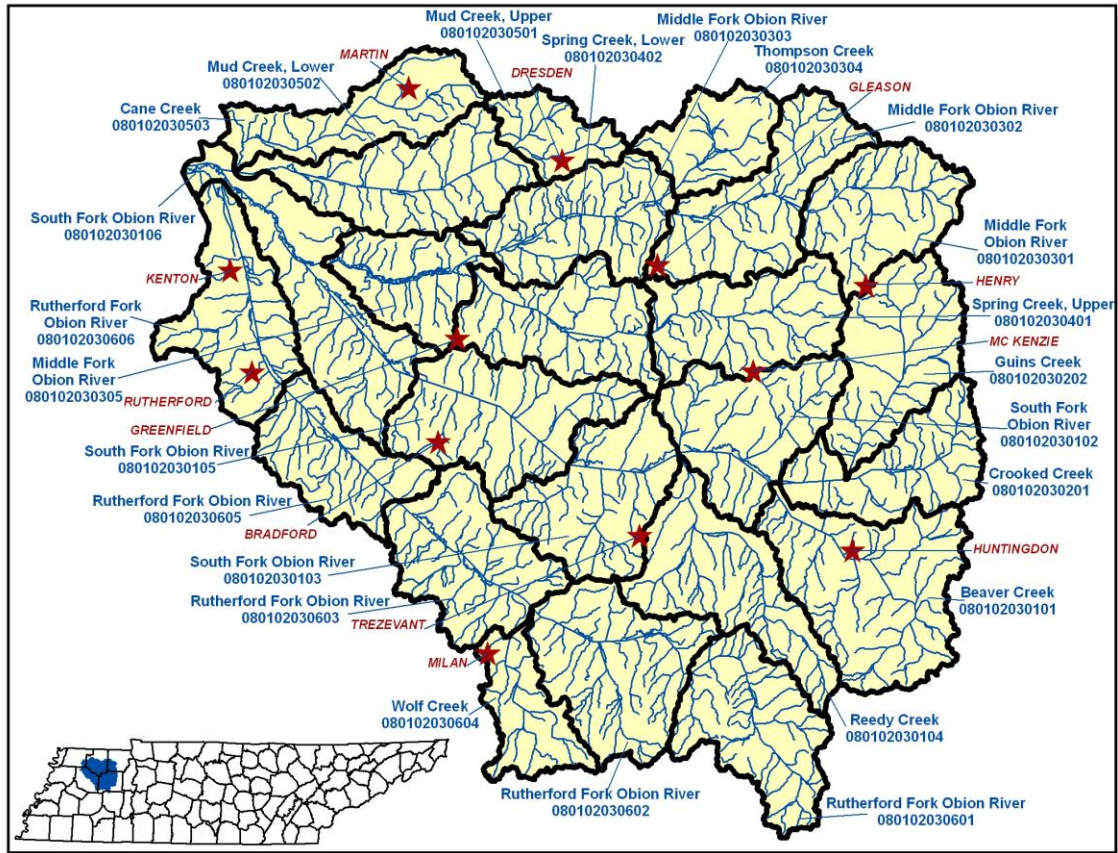
**4.1. BACKGROUND.** This chapter is organized by HUC-12 subwatershed, and the description of each subwatershed is divided into four parts:

- i. General description of the subwatershed
- ii. USGS (United States Geological Survey) gaging stations and STORET sites
- iii. Location of permitted activities
- iv. Description of nonpoint source contributions

The HUC can range from 2 to 16 digits long, more digits indicating a smaller and smaller portion of the watershed is represented. The South Fork Obion River Watershed (HUC 08010203) has been delineated into twenty-seven HUC-12 subwatersheds.

Information for this chapter was obtained from databases maintained by the Division of Water Pollution Control or provided in the WCS (Watershed Characterization System) data set. The WCS used was version 2.0 (developed by Tetra Tech, Inc for EPA Region 4) released in 2003.

WCS integrates with ArcView® v3.x and Spatial Analyst® v1.1 to analyze user-delineated (sub)watersheds based on hydrologically connected water bodies. Reports are generated by integrating WCS with Microsoft® Word. Land Use/Land Cover information from 2001 MRLC (Multi-Resolution Land Cover) data are calculated based on the proportion of county-based land use/land cover in user-delineated (sub)watersheds. Nonpoint source data in WCS are based on agricultural census data collected 1992–1998; nonpoint source data were reviewed by Tennessee NRCS staff.



**Figure 4-1. The South Fork Obion River Watershed is Composed of twenty seven USGS-Delineated Subwatersheds (12-Digit Subwatersheds).**

**4.2. CHARACTERIZATION OF HUC-12 SUBWATERSHEDS.** The Watershed Characterization System (WCS) software and data sets provided by EPA Region IV were used to characterize each subwatershed in the South Fork Obion River Watershed.

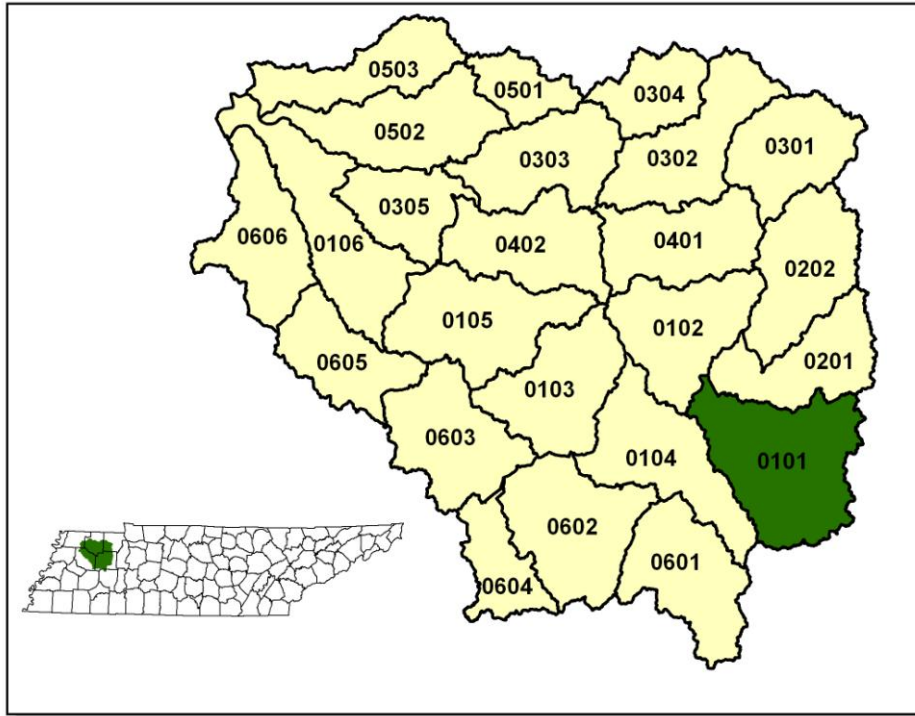
HUC-8	HUC-10	HUC-12
08010203	0801020301	080102030101 (Beaver Creek)
		080102030102 (South Fork Obion River)
		080102030103 (South Fork Obion River)
		080102030104 (Reedy Creek)
		080102030105 (South Fork Obion River)
		080102030106 (South Fork Obion River)
	0801020302	080102030201 (Crooked Creek)
		080102030202 (Guins Creek)
	0801020303	080102030301 (Middle Fork Obion River)
		080102030302 (Middle Fork Obion River)
		080102030303 (Middle Fork Obion River)
		080102030304 (Thompson Creek)
		080102030305 (Middle Fork Obion River)
	0801020304	080102030401 (Spring Creek, Upper)
		080102030402 (Spring Creek, Lower)
	0801020305	080102030501 (Mud Creek, Upper)
		080102030502 (Mud Creek, Lower)
		080102030503 (Cane Creek)
	0801020306	080102030601 (Rutherford Fork Obion River)
		080102030602 (Rutherford Fork Obion River)
		080102030603 (Rutherford Ford Obion River)
		080102030604 (Wolf Creek)
		080102030605 (Rutherford Fork Obion River)
		080102030606 (Rutherford Fork Obion River)

**Table 4-1. HUC-12 Drainage Areas are Nested Within HUC-10 Drainages.** NRCS worked with USGS to delineate the HUC-10 and HUC-12 drainage boundaries.

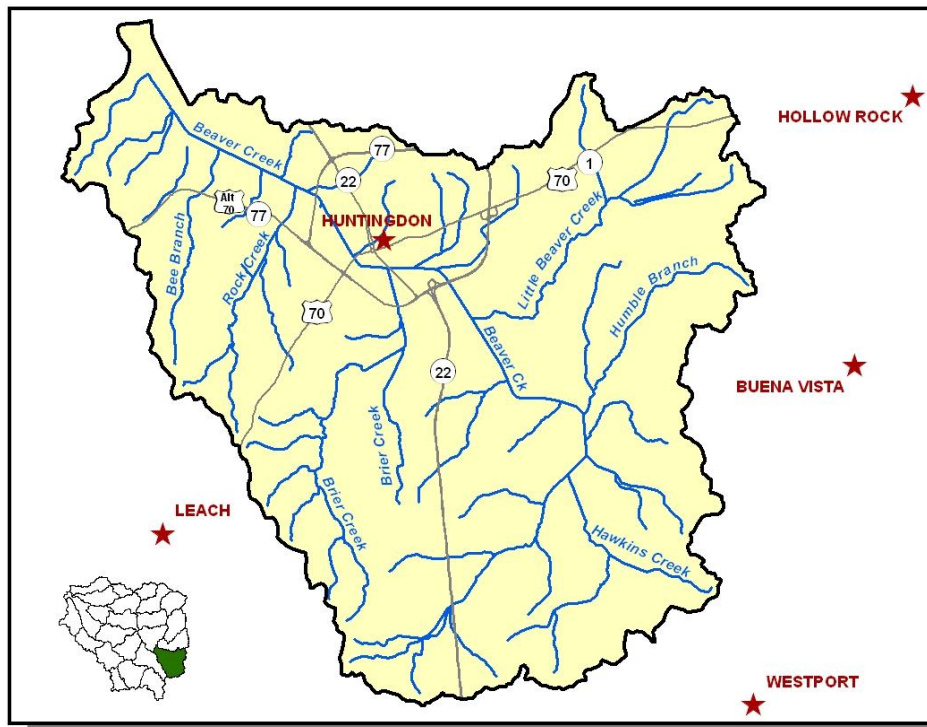


**4.2.A. 080102030101 (Beaver Creek).**

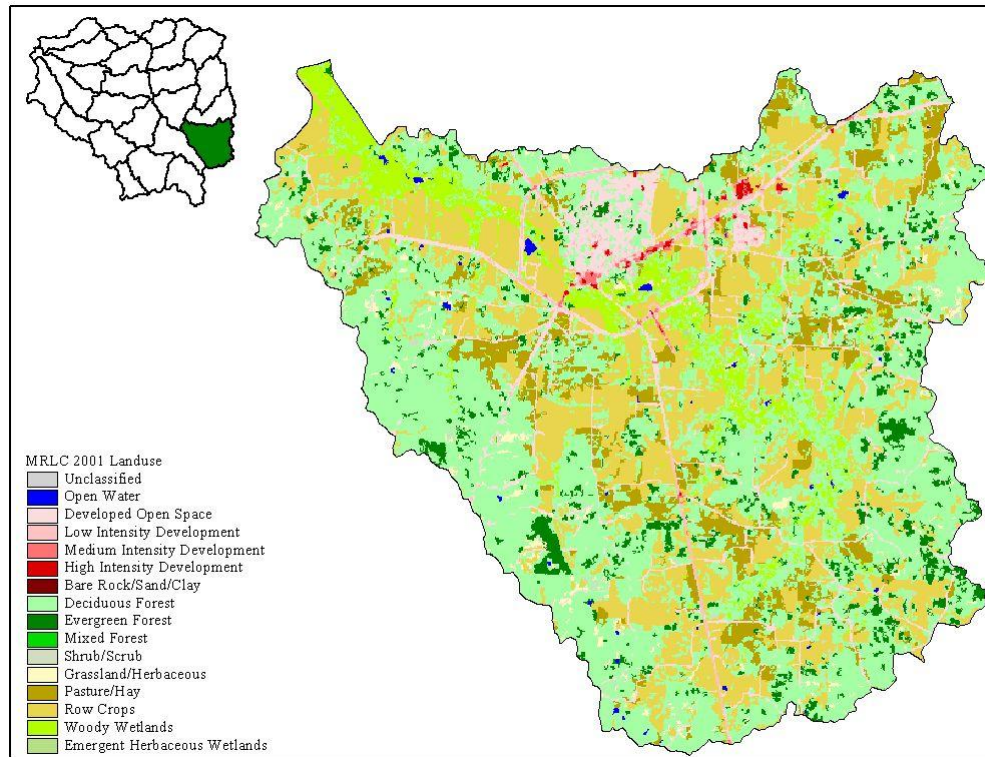
**4.2.A.i. General Description.**



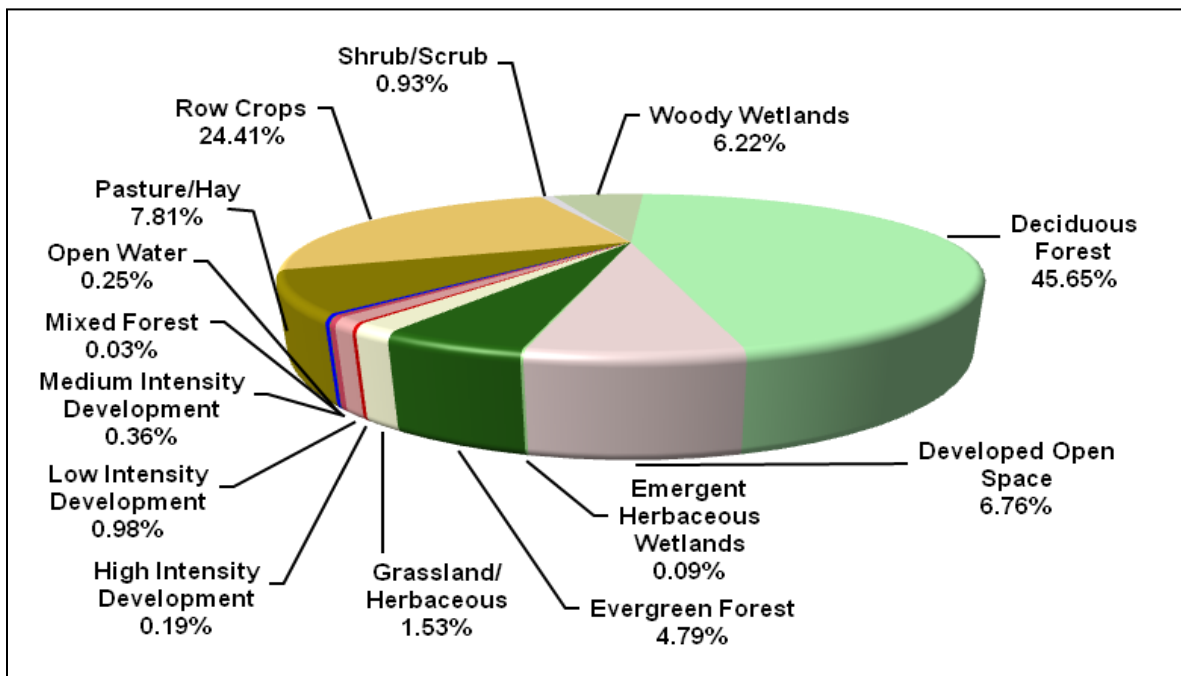
**Figure 4-2. Location of Subwatershed 080102030101.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



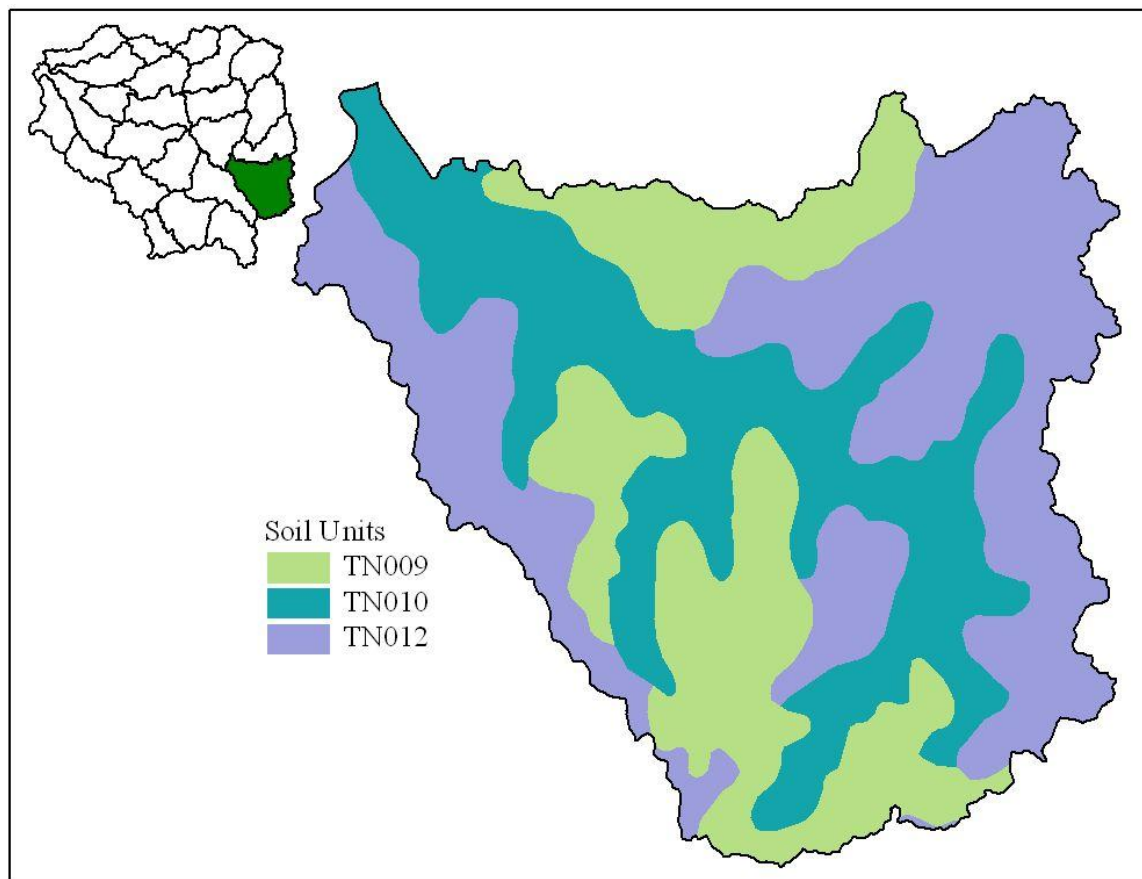
**Figure 4-3. Locational Details of Subwatershed 080102030101.**



**Figure 4-4. Illustration of Land Use Distribution in Subwatershed 080102030101.**



**Figure 4-5. Land Use Distribution in Subwatershed 080102030101.** More information is provided in Appendix IV.



**Figure 4-6. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030101.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN009	7.00	C	1.30	5.10	Silty Loam	0.43
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN012	1.00	C	2.52	5.13	Silty Loam	0.39

**Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030101.** The definition of "Hydrologic Group" is provided in Appendix IV.

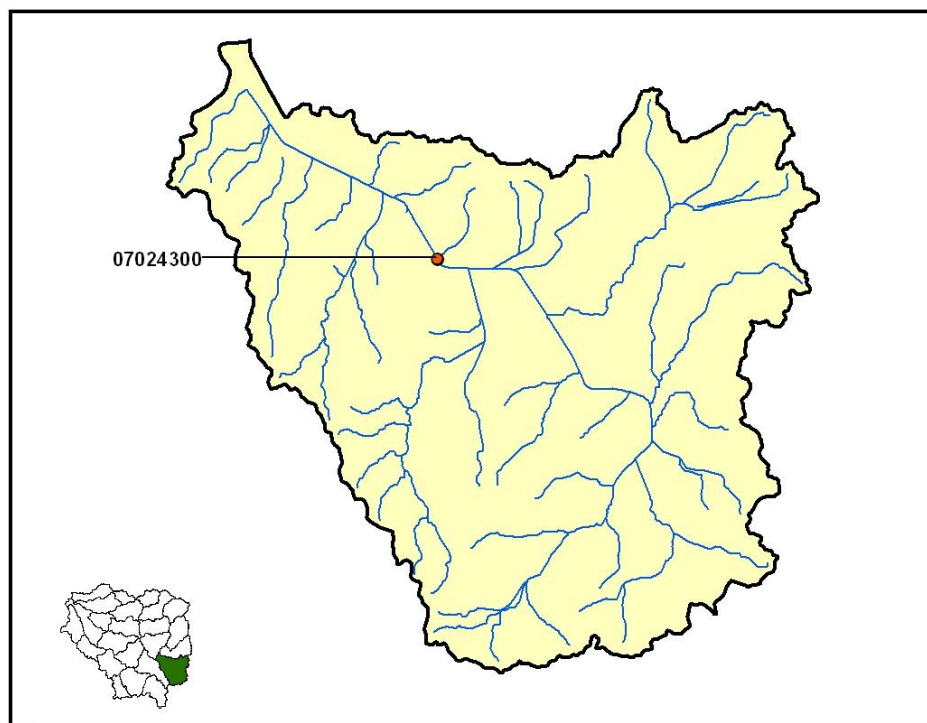
County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Carroll	27,514	28,990	29,475	12.37	3,403	3,585	3,645	7.10

**Table 4-3. Population Estimates in Subwatershed 080102030101.**

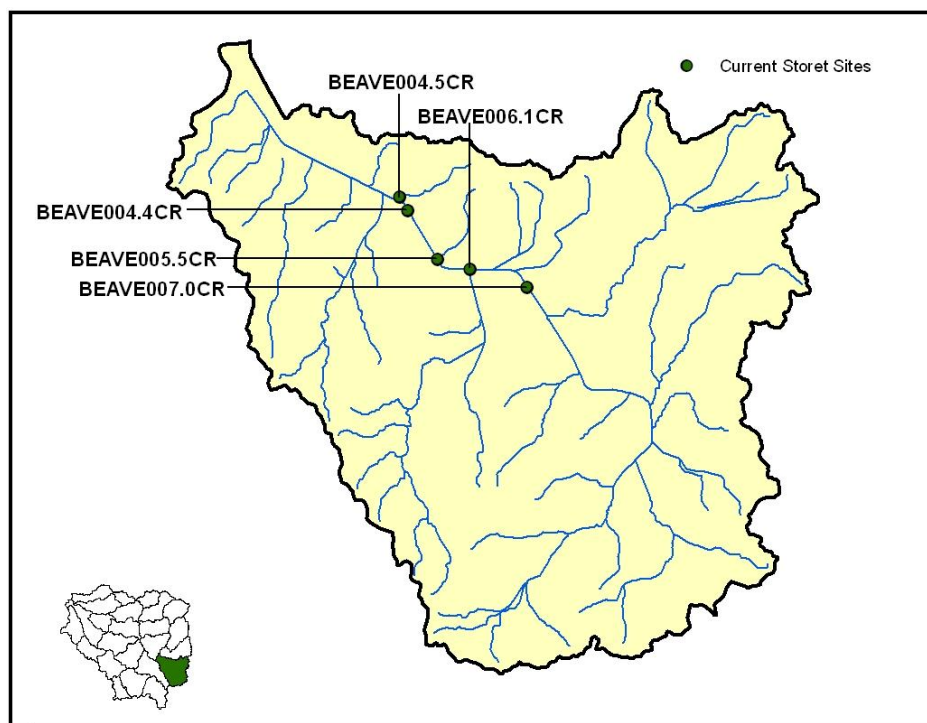
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Huntingdon	Carroll	4,180	1,790	1,566	212	12

**Table 4-4. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030101.**

**4.2.A.ii. USGS Gaging Stations and STORET Sites.**



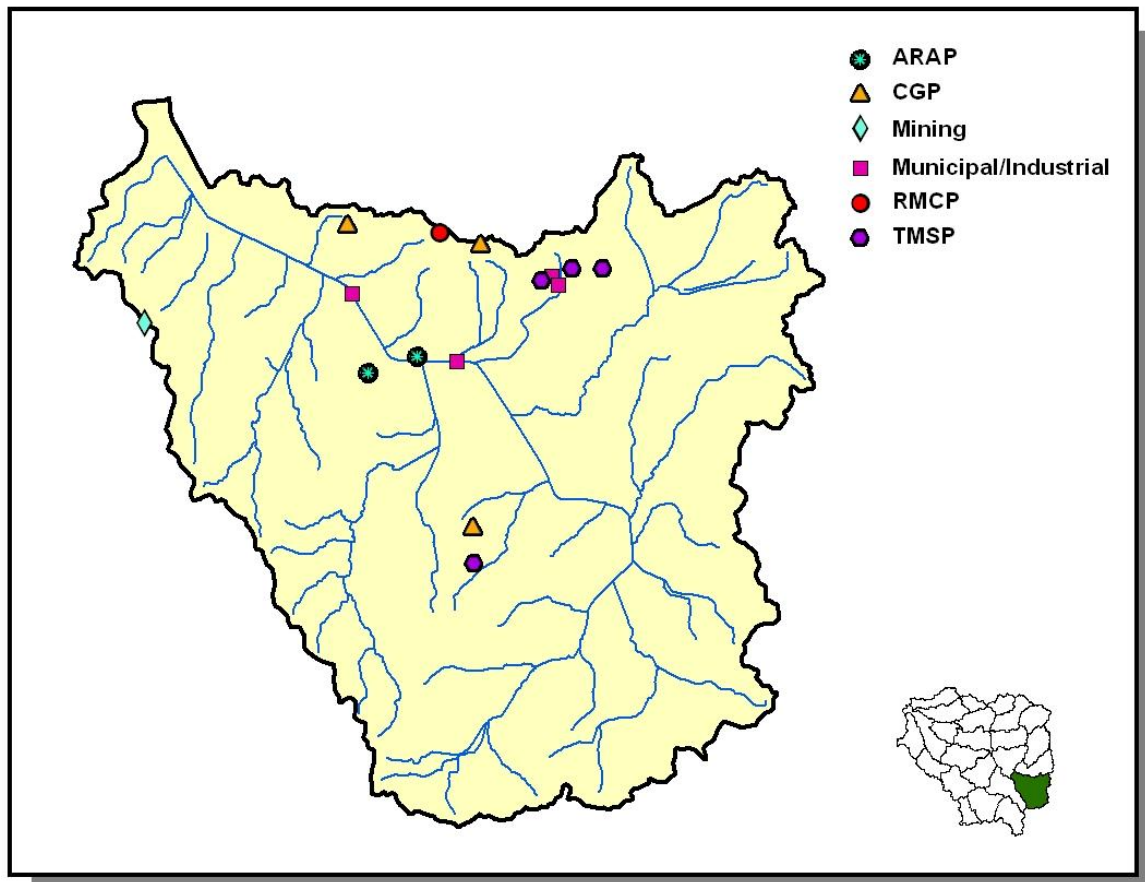
**Figure 4-7. Location of USGS Continuous Record Gaging Stations in Subwatershed 080102030101.** More information is provided in Appendix IV.



**Figure 4-8. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030101.** More information, including site names and locations, is provided in Appendix IV.

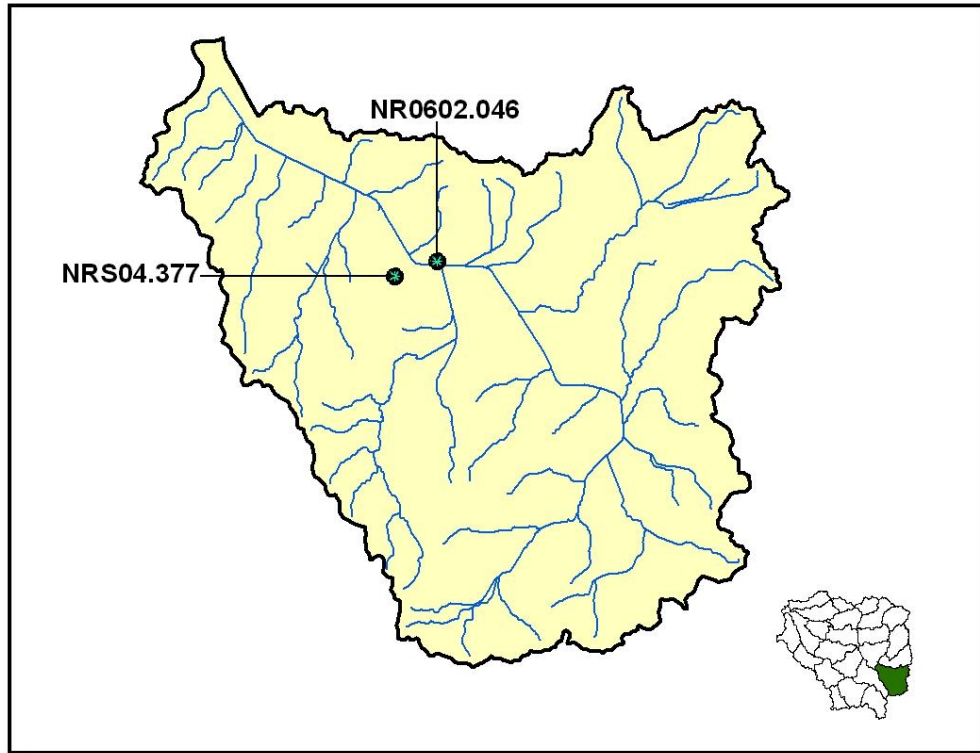


**4.2.A.iii. Permitted Activities.**

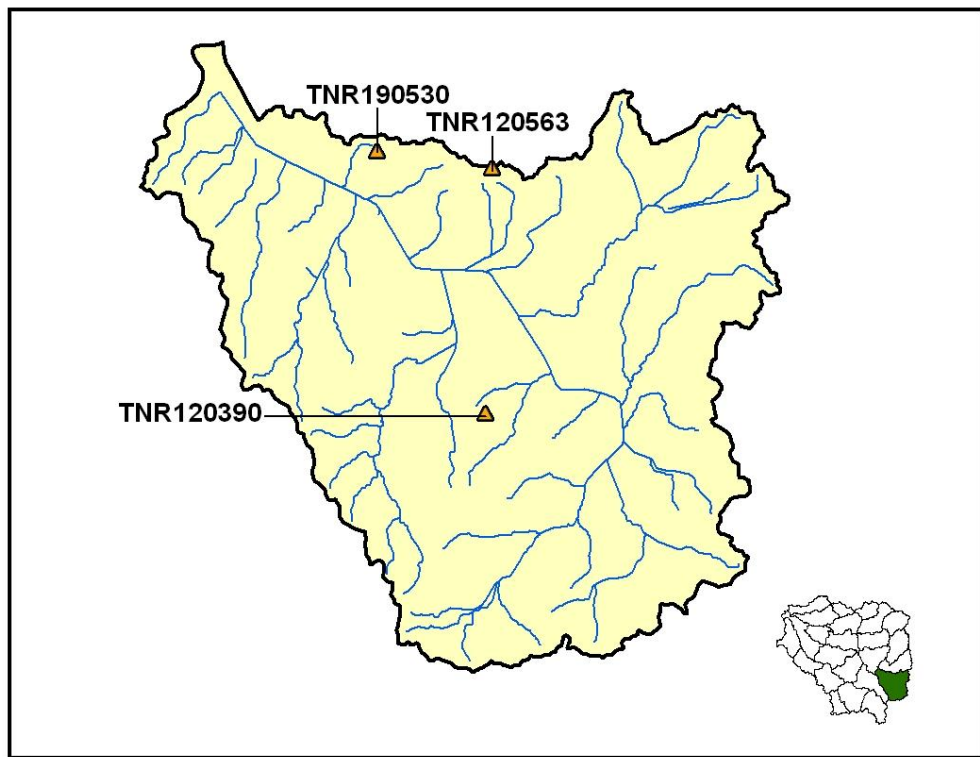


**Figure 4-9. Location of Permits Issued in Subwatershed 080102030101.** More information, including the names of facilities, is provided in Appendix IV.

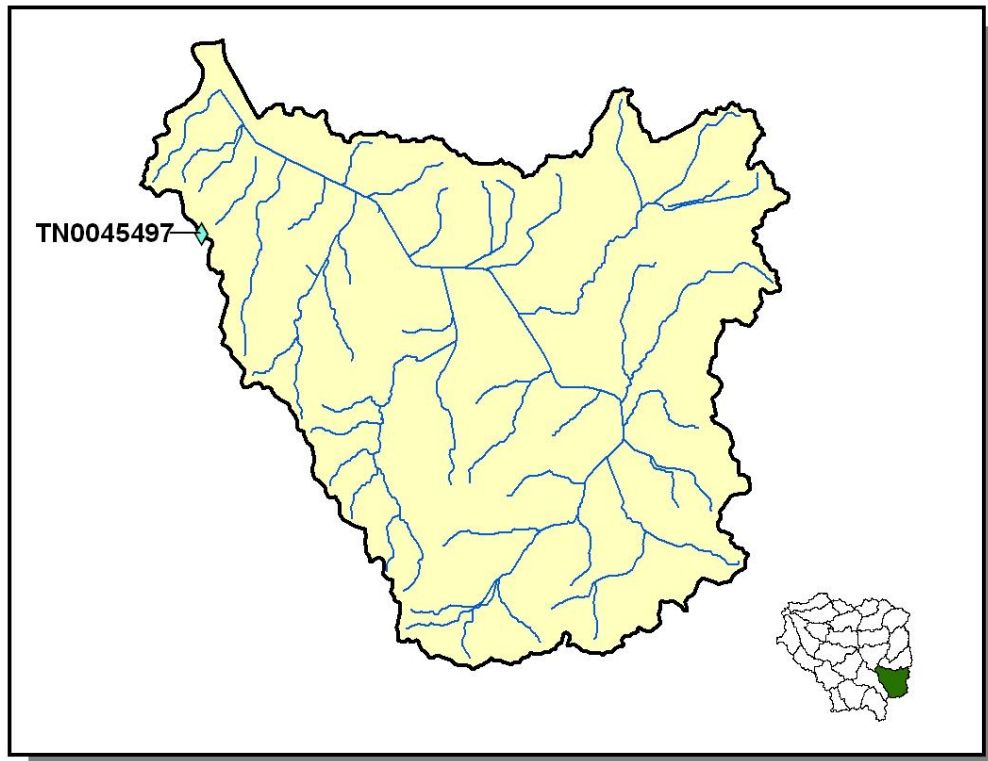




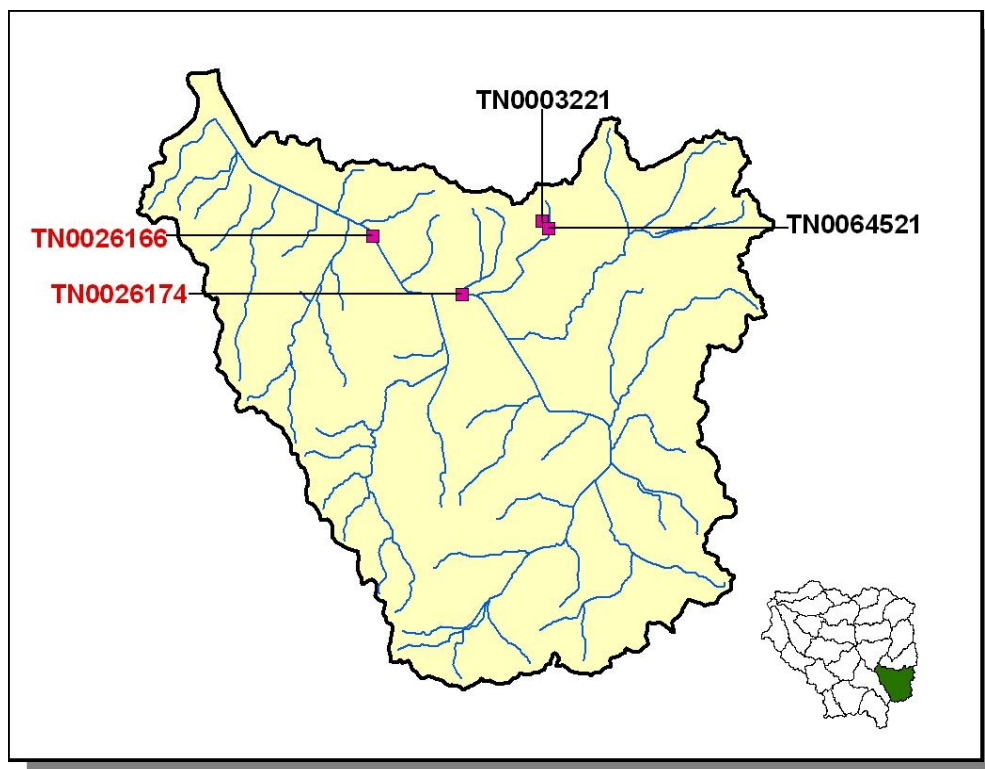
**Figure 4-10. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030101.** More information is provided in Appendix IV.



**Figure 4-11. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030101.** More information is provided in Appendix IV.



**Figure 4-12. Location of Permitted Mining Facilities in Subwatershed 080102030101.** More information is provided in Appendix IV.



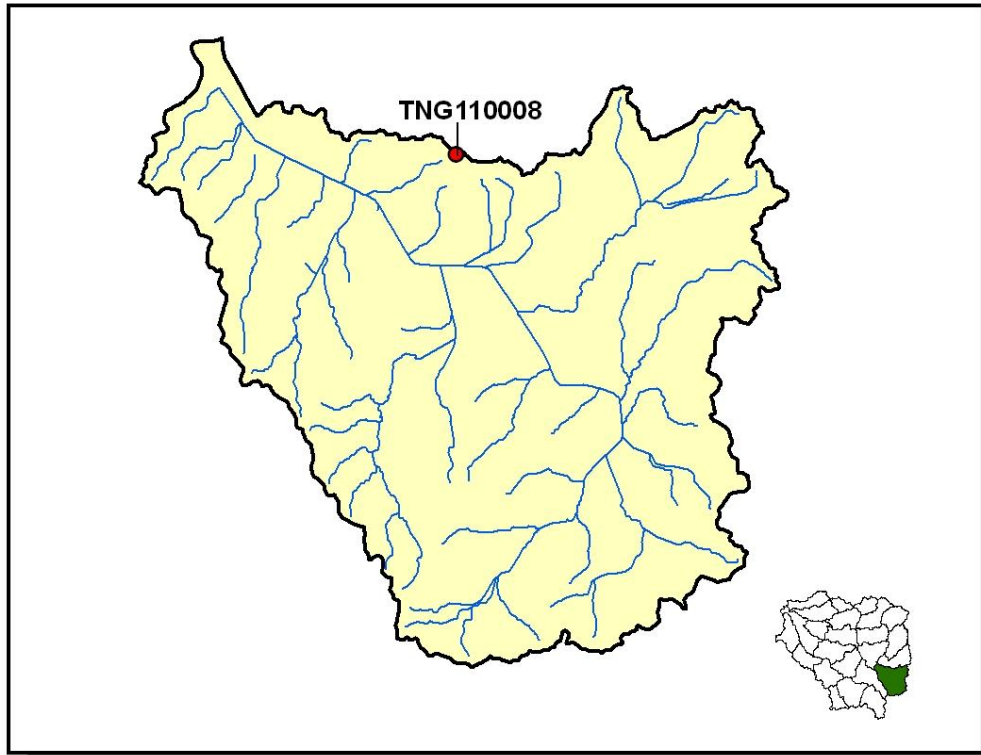
**Figure 4-13. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030101.** Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the name of the facility is provided in Appendix IV.

PERMIT #	7Q10	DISCHARGE FLOW
TN0026166	12.7	0.65
TN0026174	12.26	0.3

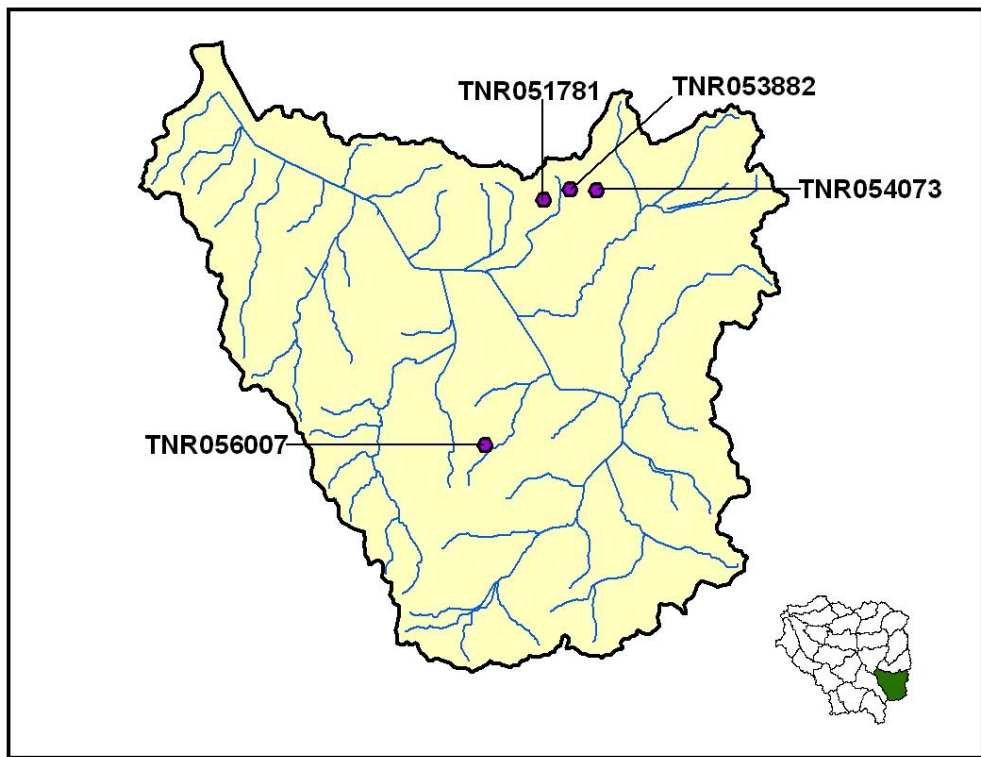
**Table 4-5. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030101.** Data are in million gallons per day (MGD). Data were obtained from permit files.

PERMIT #	CBOD <sub>5</sub>	CBOD % REMOVAL	TRC	E. coli	AMMONIA AS N (TOTAL)	WET	DO	pH	TSS	SS
TN0026166	X	X	X	X	X		X	X	X	X
TN0026174	X	X	X	X	X	X	X	X	X	X

**Table 4-6. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030101.** CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-day); TRC, Total Residual Chlorine; WET, Whole Effluent Toxicity; DO, Dissolved Oxygen; TSS, Total Suspended Solids; SS, Settleable Solids.



**Figure 4-14. Location of RMCP (Ready Mix Concrete Plant) facilities in Subwatershed 080102030101.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-15. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030101.** More information is provided in Appendix IV.

**4.2.A.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs
Carroll	9,636	17,433	272	673	4,949

**Table 4-7. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0

**Table 4-8. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

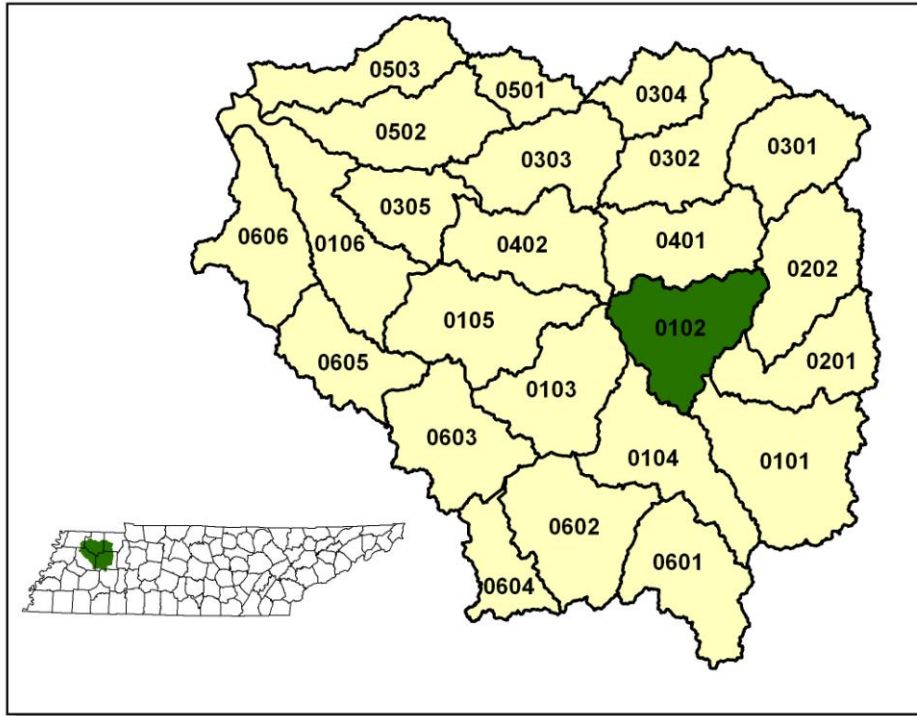
CROPS	TONS/ACRE/YEAR
Wheat (Close Grown Cropland)	18.50
Soybeans (Row Crops)	10.20
Other Cropland not Planted	9.50
Cotton (Row Crops)	7.58
Corn (Row Crops)	5.95
Conservation Reserve Program Land	1.23
Farmsteads and Ranch Headquarters	1.12
Other Land in Farms (Other Far	0.59
Grass Forbs Legumes Mixed (Pastureland)	0.58
Legume Grass (Hayland)	0.46
Grass (Pastureland)	0.40
Grass (Hayland)	0.21
Legume (Hayland)	0.07

**Table 4-9. Annual Estimated Total Soil Loss in Subwatershed 080102030101.**

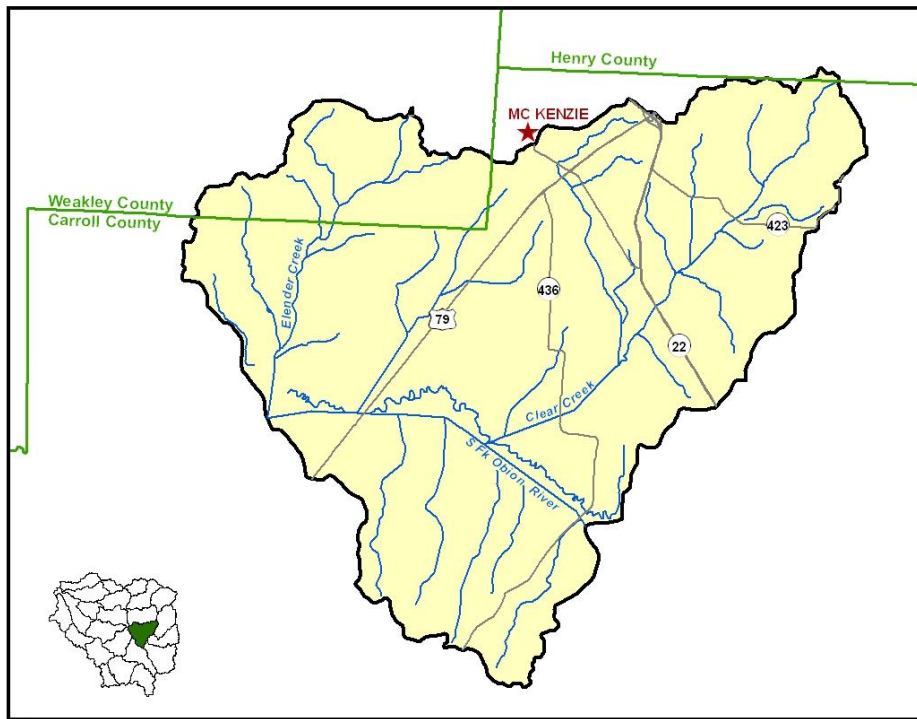


#### 4.2.B. 080102030102 (South Fork Obion River).

##### 4.2.B.i. General Description.

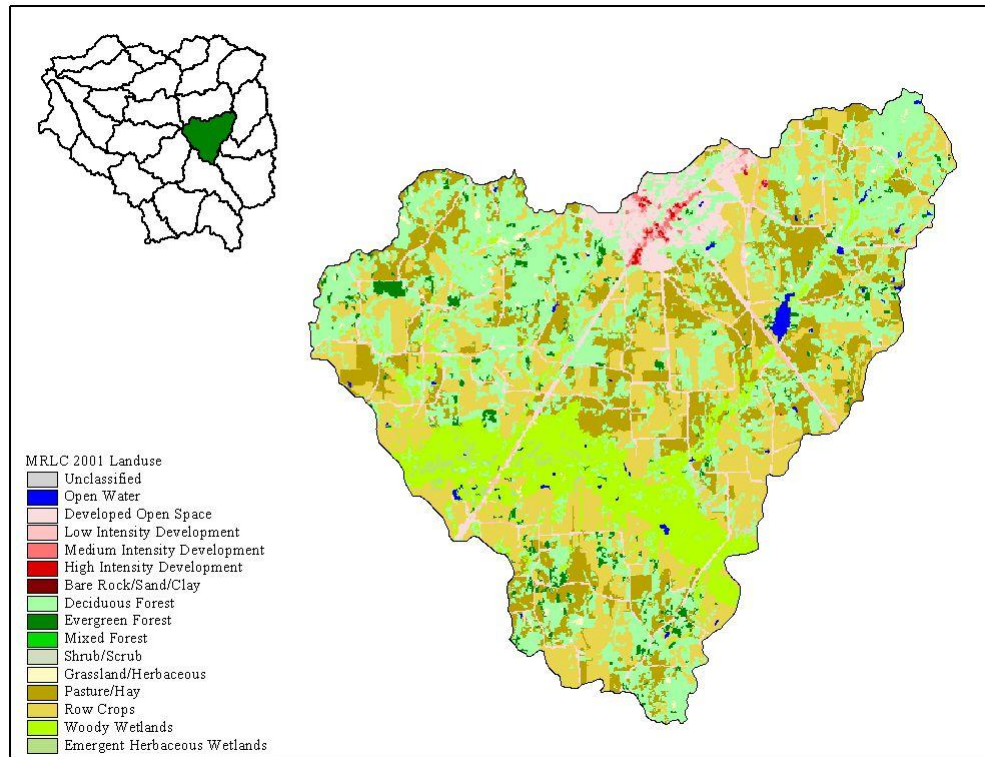


**Figure 4-16. Location of Subwatershed 080102030102.** All South Fork Obion RiverHUC-12 subwatershed boundaries are shown for reference.

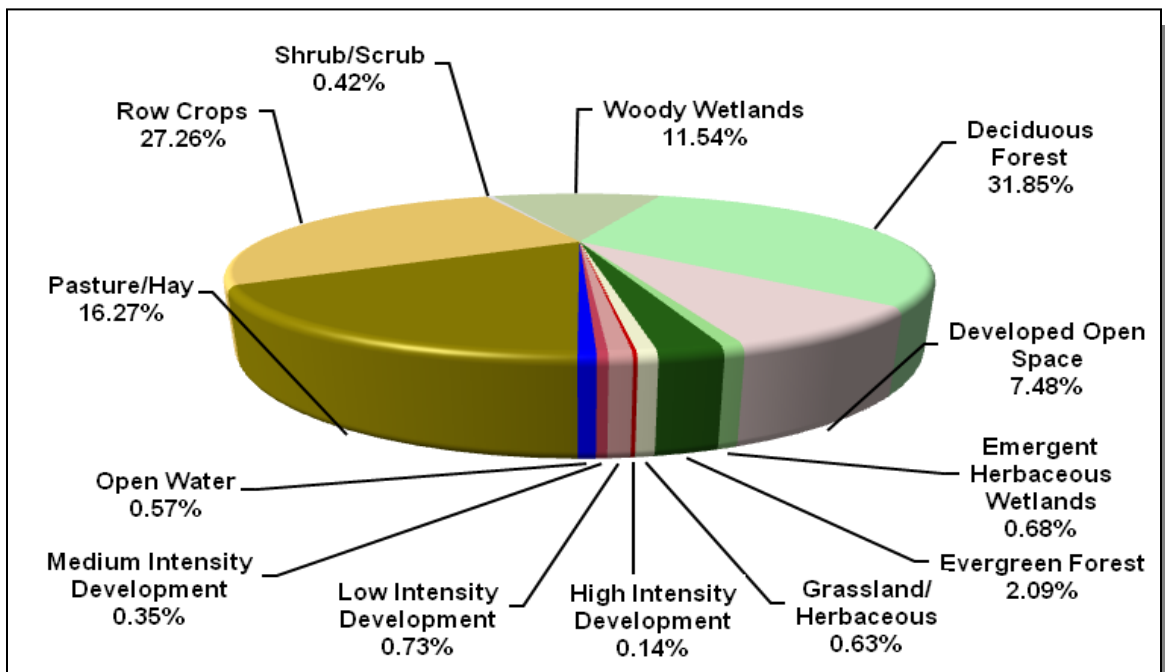


**Figure 4-17. Locational Details of Subwatershed 080102030102.**

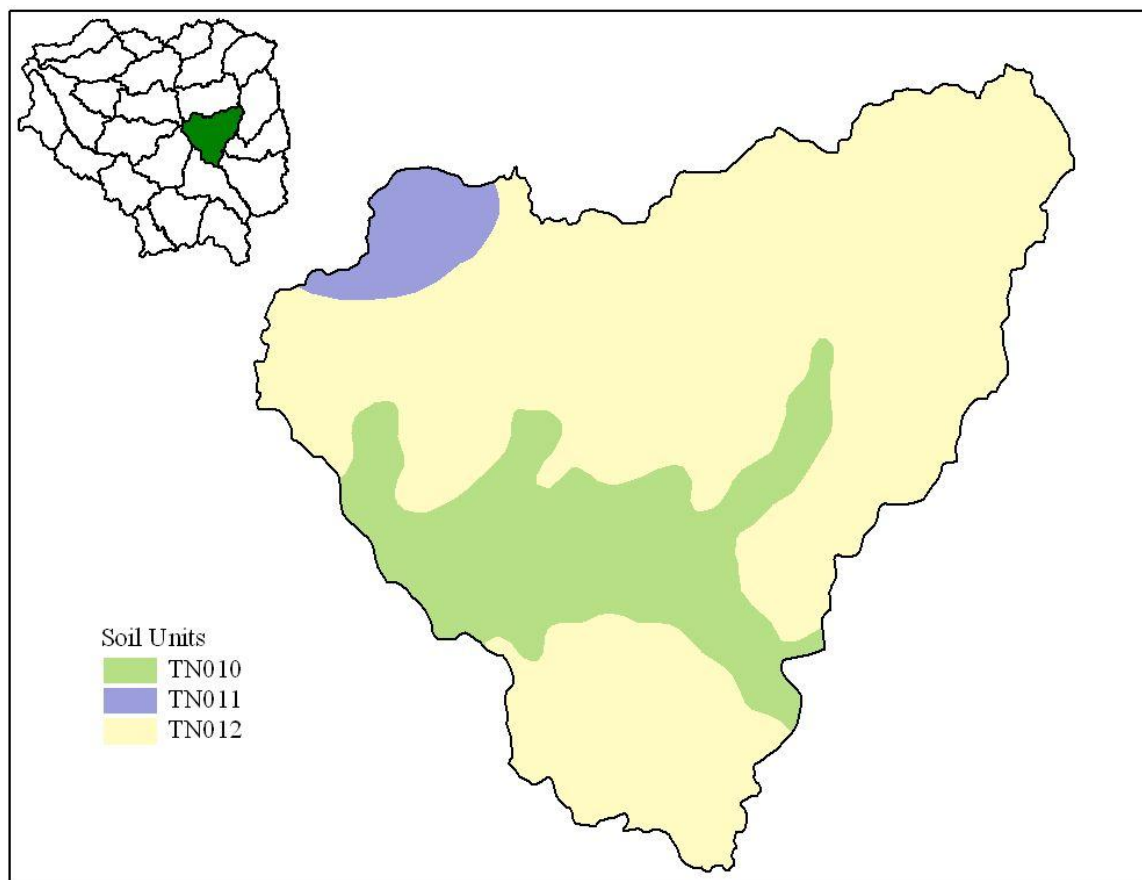




**Figure 4-18. Illustration of Land Use Distribution in Subwatershed 080102030102.**



**Figure 4-19. Land Use Distribution in Subwatershed 080102030102.** More information is provided in Appendix IV.



**Figure 4-20. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030102.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40
TN012	1.00	C	2.52	5.13	Silty Loam	0.39

**Table 4-10. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030102.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Carroll	27,514	28,990	29,475	7.96	2,189	2,307	2,345	7.10
Weakley	31,972	32,808	34,895	0.73	235	241	256	8.90
<b>Total</b>	<b>59,486</b>	<b>61,798</b>	<b>64,370</b>		<b>2,424</b>	<b>2,548</b>	<b>2,601</b>	<b>7.30</b>

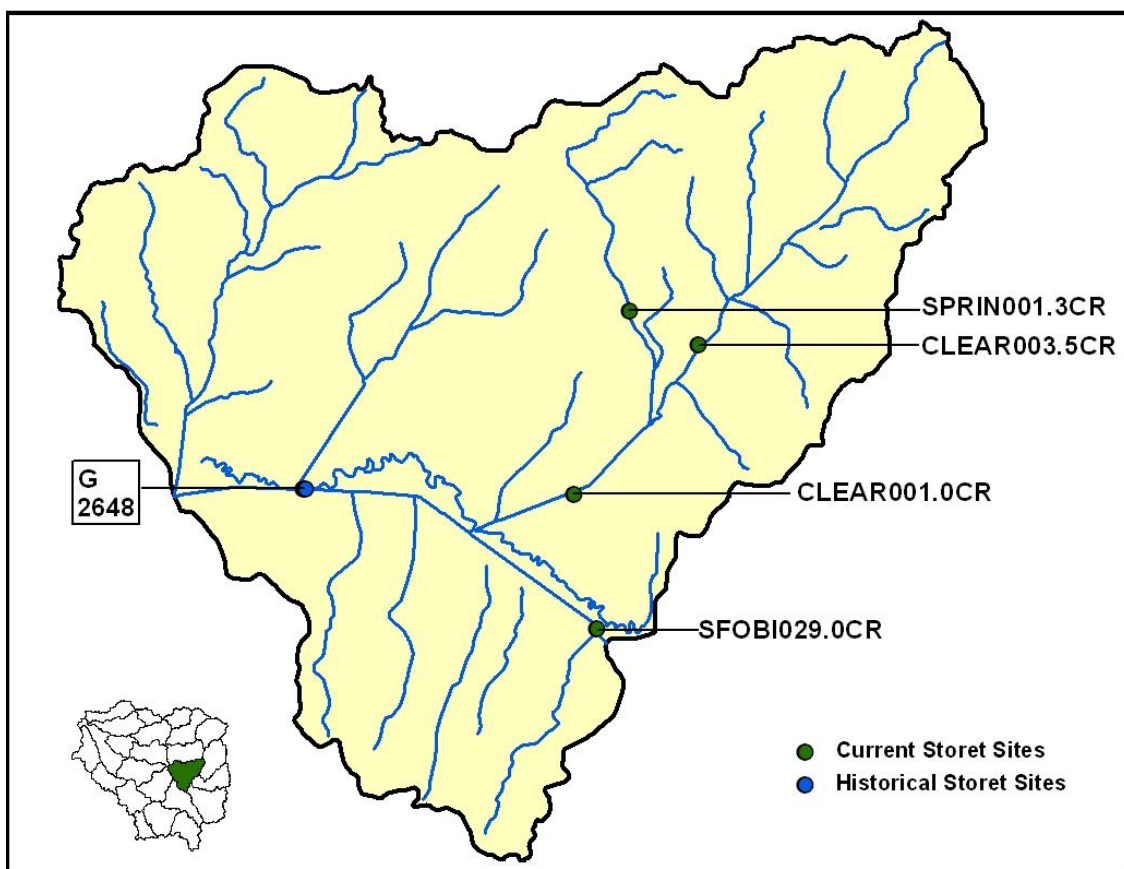
*Table 4-11. Population Estimates in Subwatershed 080102030102.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
McKenzie	Carroll	5,079	2,144	1,917	227	0

*Table 4-12. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030102.*

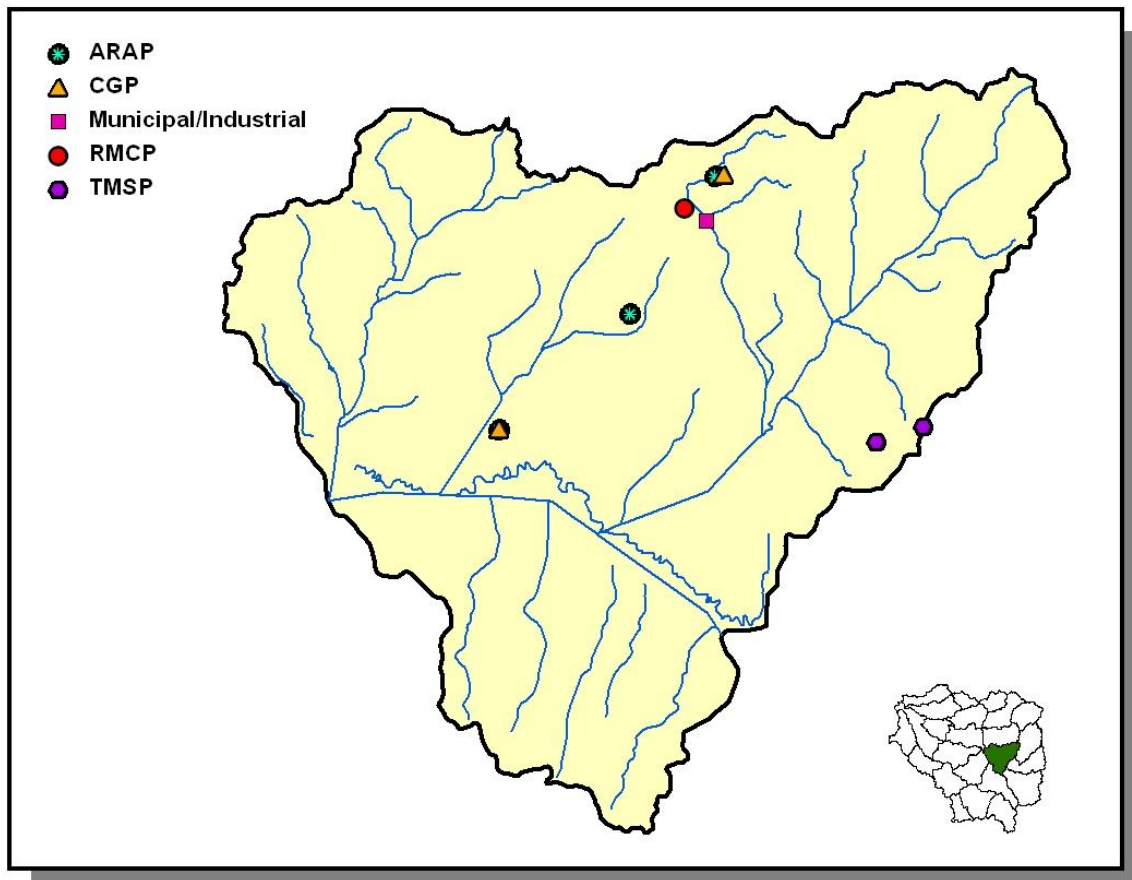
#### 4.2.B.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations located in subwatershed 080102030102.

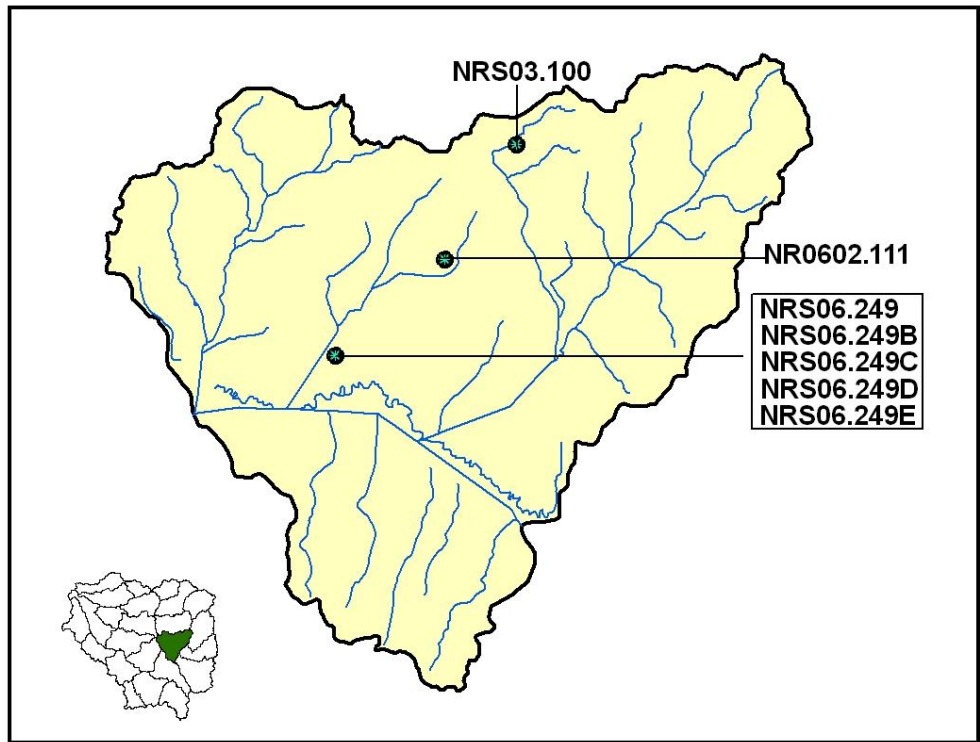


**Figure 4-21. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030102.** More information, including site names and locations, is provided in Appendix IV.

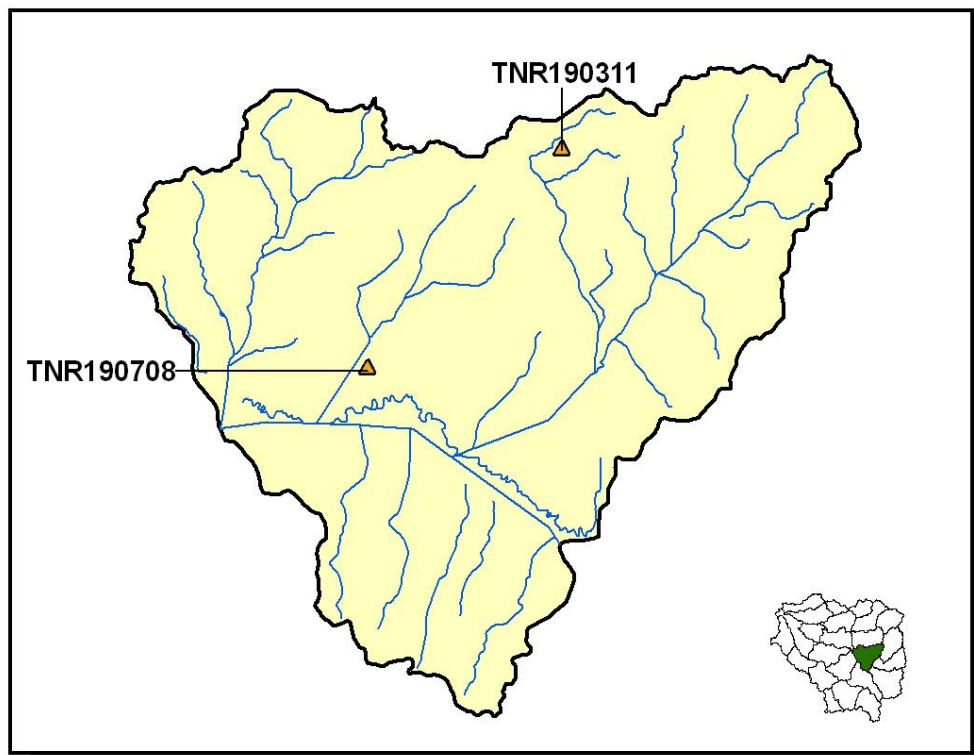
**4.2.B.iii. Permitted Activities.**



**Figure 4-22. Location of Permits Issued in Subwatershed 080102030102.** More information, including the names of facilities, is provided in Appendix IV.

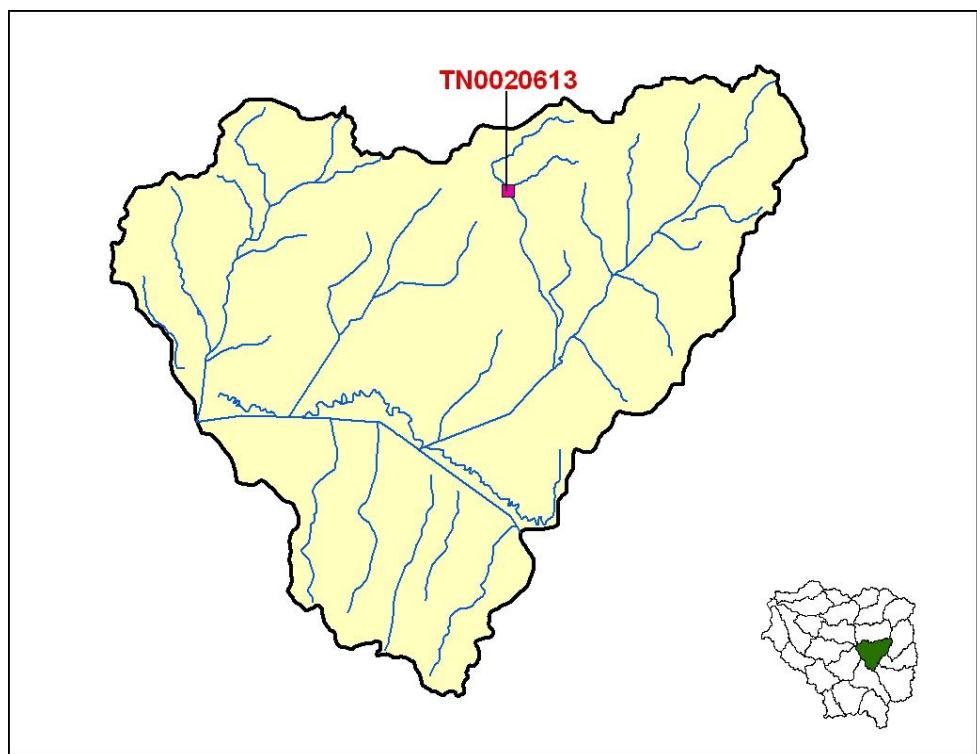


**Figure 4-23. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030102.** More information is provided in Appendix IV.



**Figure 4-24. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030102.** More information is provided in Appendix IV.





**Figure 4-25. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030102.** Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the name of the facility is provided in Appendix IV.

PERMIT #	7Q10	DISCHARGE FLOW
TN0020613	0.0	2.0

**Table 4-13. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030102.** Data are in million gallons per day (MGD). Data were obtained from permit files.

PERMIT #	Zn	Hg	Se	Ag	Cu	CYANIDE TOTAL (CN-)
TN0020613	X	X	X	X	X	

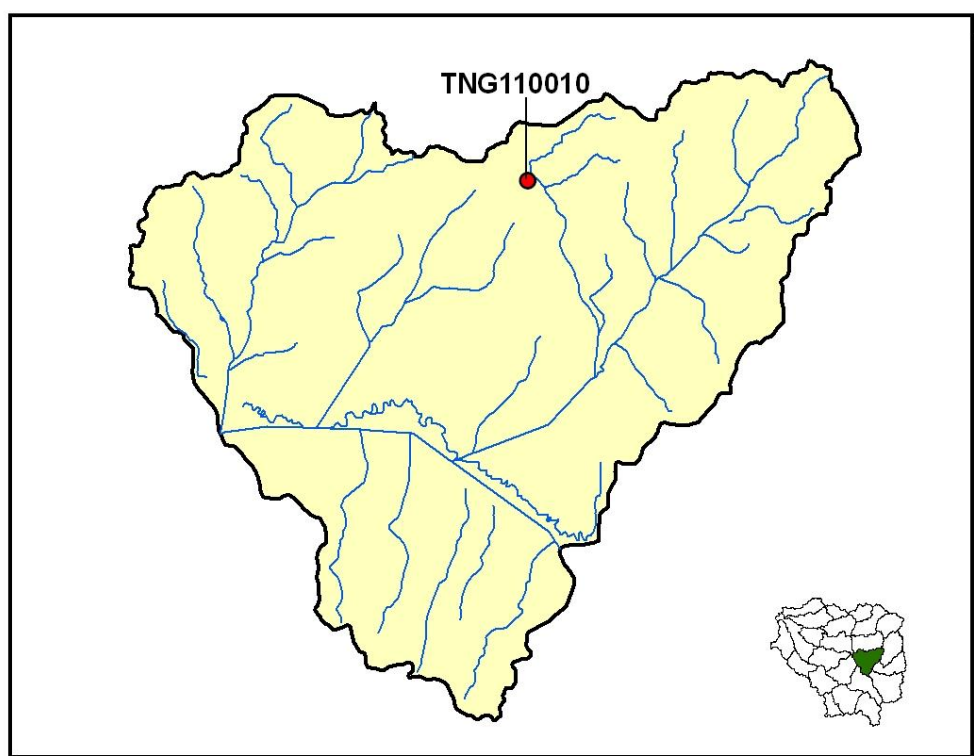
**Table 4-14. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030102.**

PERMIT #	FLOW	WET	DO	pH	TSS	TSS % REMOVAL	SS
TN0020613	X	X	X	X	X	X	X

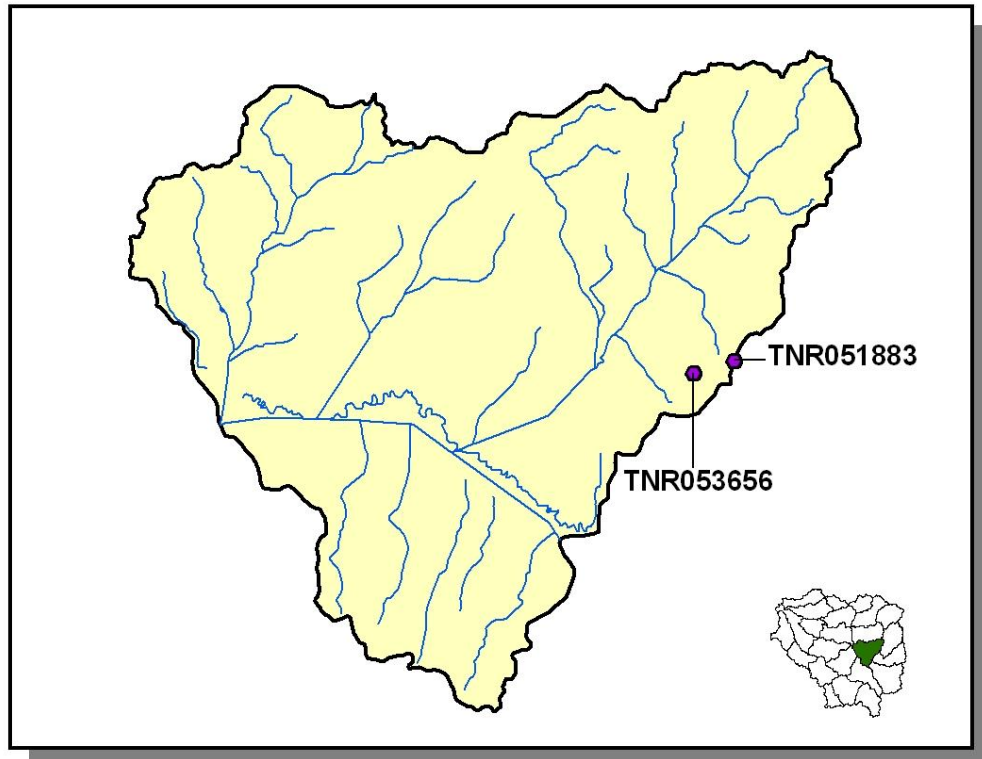
**Table 4-15. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030102.** WET, Whole Effluent Toxicity; DO, Dissolved Oxygen; TSS, Total Suspended Solids; SS, Settleable Solids.

PERMIT #	CBOD <sub>5</sub>	CBOD % REMOVAL	E. coli	PHOSPHORUS TOTAL	NITROGEN TOTAL	TRC	AMMONIA AS N (TOTAL)
TN0020613	X	X	X	X	X	X	X

**Table 4-16. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030102.** CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-day); TRC, Total Residual Chlorine.



**Figure 4-26. Location of RMCP (Ready Mix Concrete Plant) facilities in Subwatershed 080102030102.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-27. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030102.** More information is provided in Appendix IV.

**4.2.B.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-17. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0
Weakley	96.1	95.9	6.7	24.6

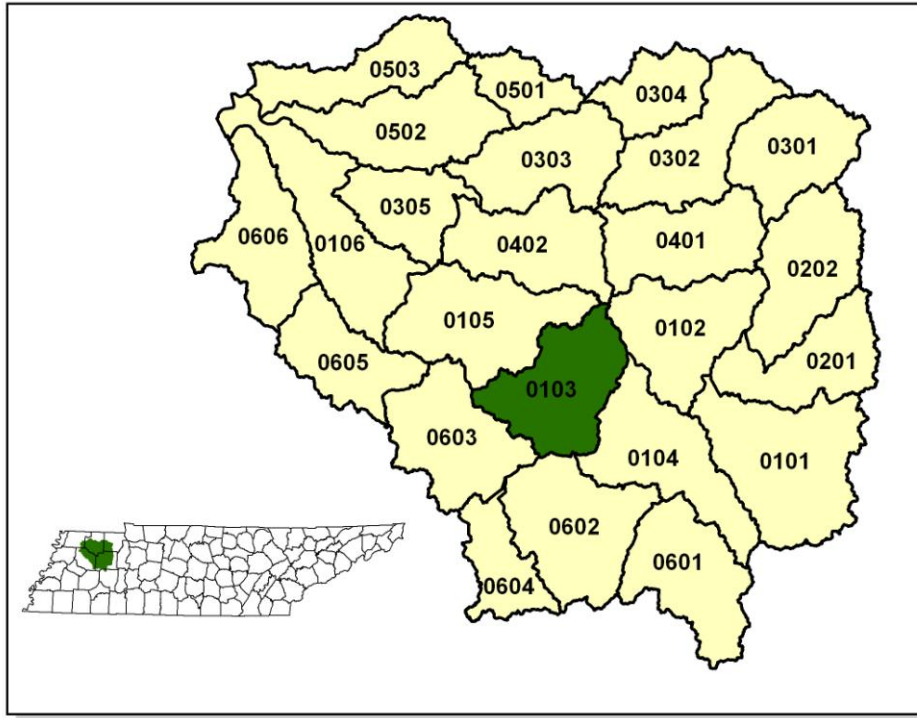
**Table 4-18. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Wheat (Close Grown Cropland)	17.82
Soybeans (Row Crops)	10.00
Other Cropland not Planted	9.10
Cotton (Row Crops)	7.58
Corn (Row Crops)	6.08
Legume (Pastureland)	1.47
Conservation Reserve Program Land	1.16
Farmsteads and Ranch Headquarters	1.06
Grass Forbs Legumes Mixed (Pastureland)	0.62
Other Land in Farms	0.59
Legume Grass (Hayland)	0.46
Grass (Pastureland)	0.37
Grass (Hayland)	0.21
Legume (Hayland)	0.10

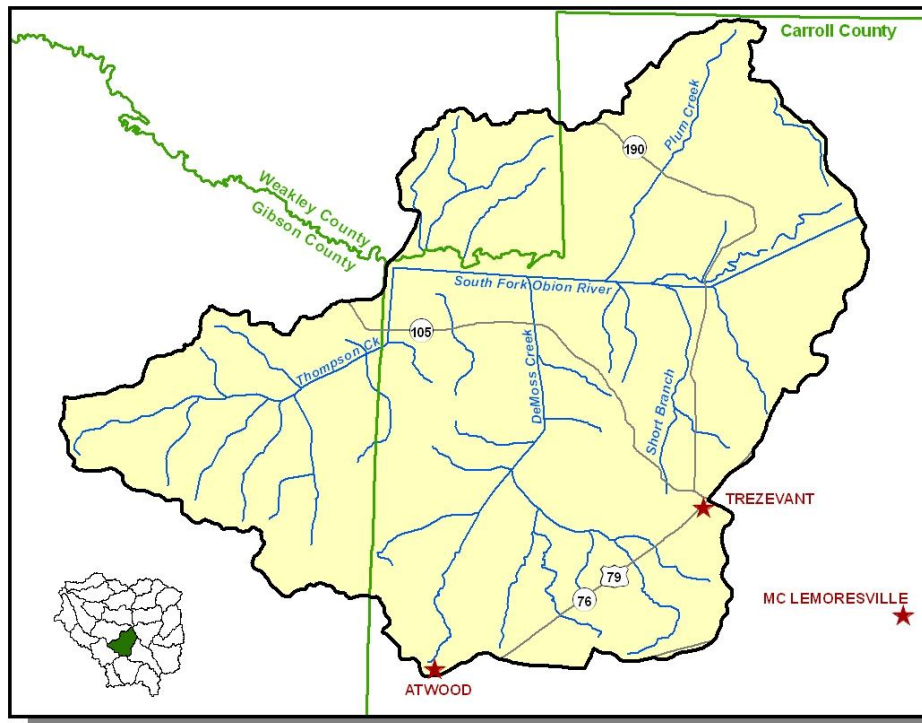
**Table 4-19. Annual Estimated Total Soil Loss in Subwatershed 080102030102.**

#### 4.2.C. 080102030103 (South Fork Obion River).

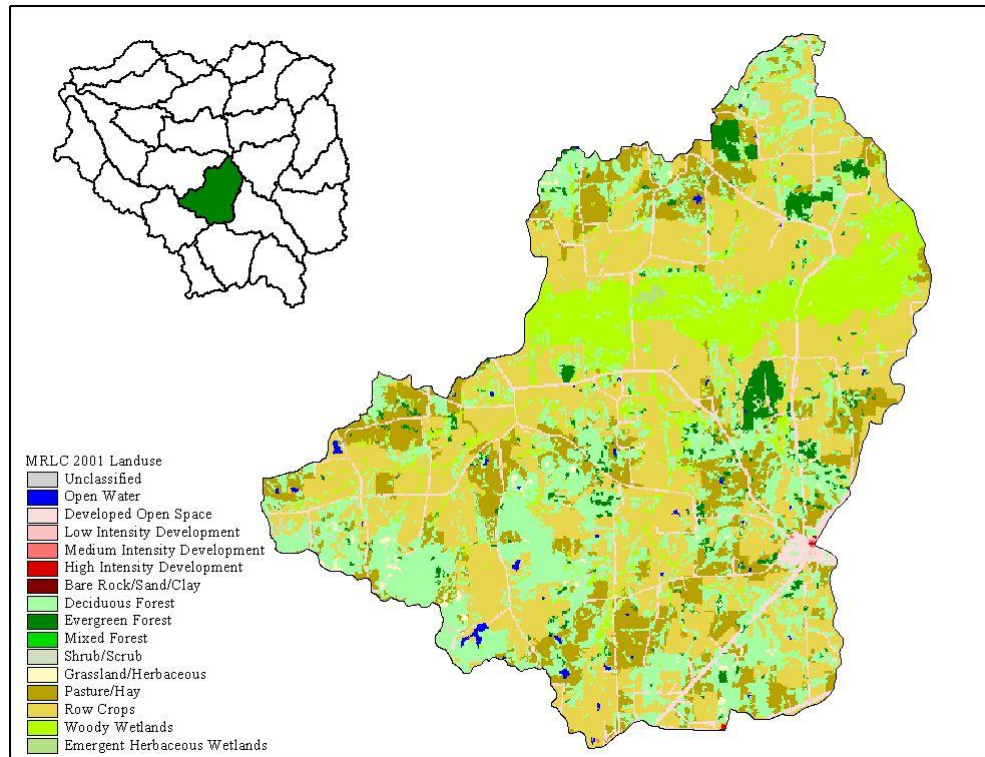
##### 4.2.C.i. General Description.



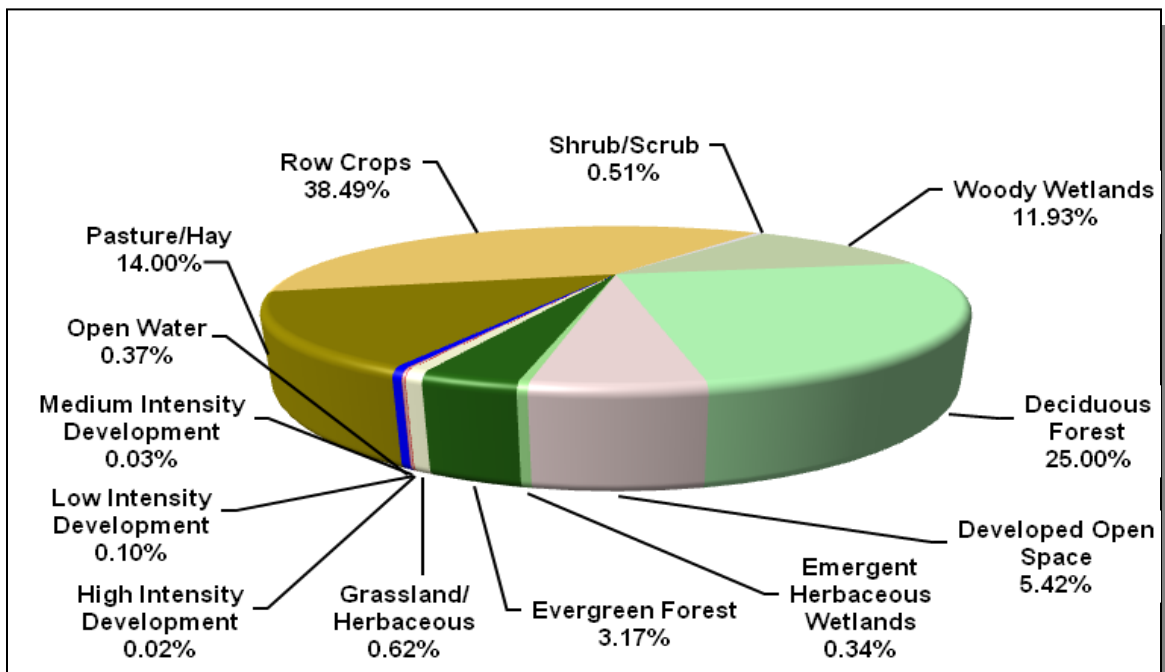
**Figure 4-28. Location of Subwatershed 080102030103.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



**Figure 4-29. Locational Details of Subwatershed 080102030103.**

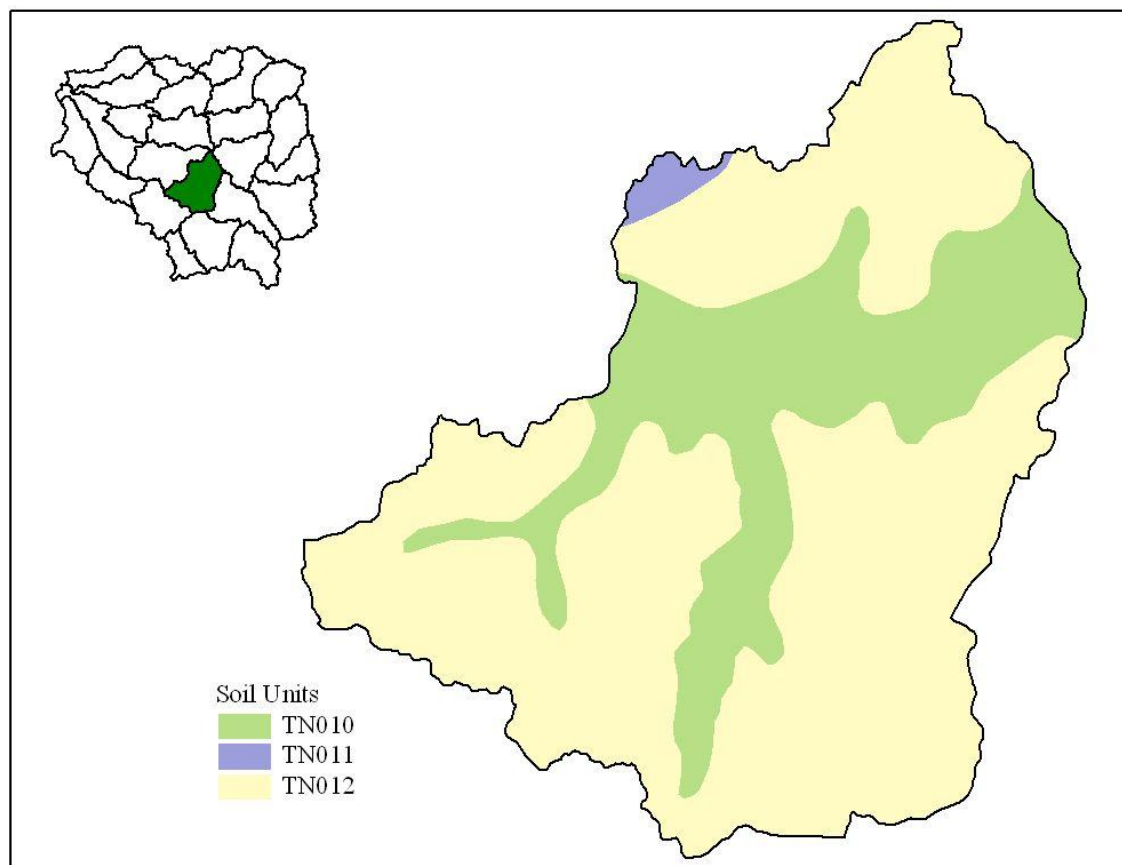


**Figure 4-30. Illustration of Land Use Distribution in Subwatershed 080102030103.**



**Figure 4-31. Land Use Distribution in Subwatershed 080102030103.** More information is provided in Appendix IV.





**Figure 4-32. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030103.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40
TN012	1.00	C	2.52	5.13	Silty Loam	0.39

**Table 4-20. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030103.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Carroll	27,514	28,990	29,475	6.26	1,724	1,816	1,847	7.10
Gibson	46,315	48,083	48,152	1.82	843	875	876	3.90
Weakley	31,972	32,808	34,895	0.62	200	205	218	9.00
<b>Total</b>	<b>105,801</b>	<b>109,881</b>	<b>112,522</b>		<b>2,767</b>	<b>2,896</b>	<b>2,941</b>	<b>6.30</b>

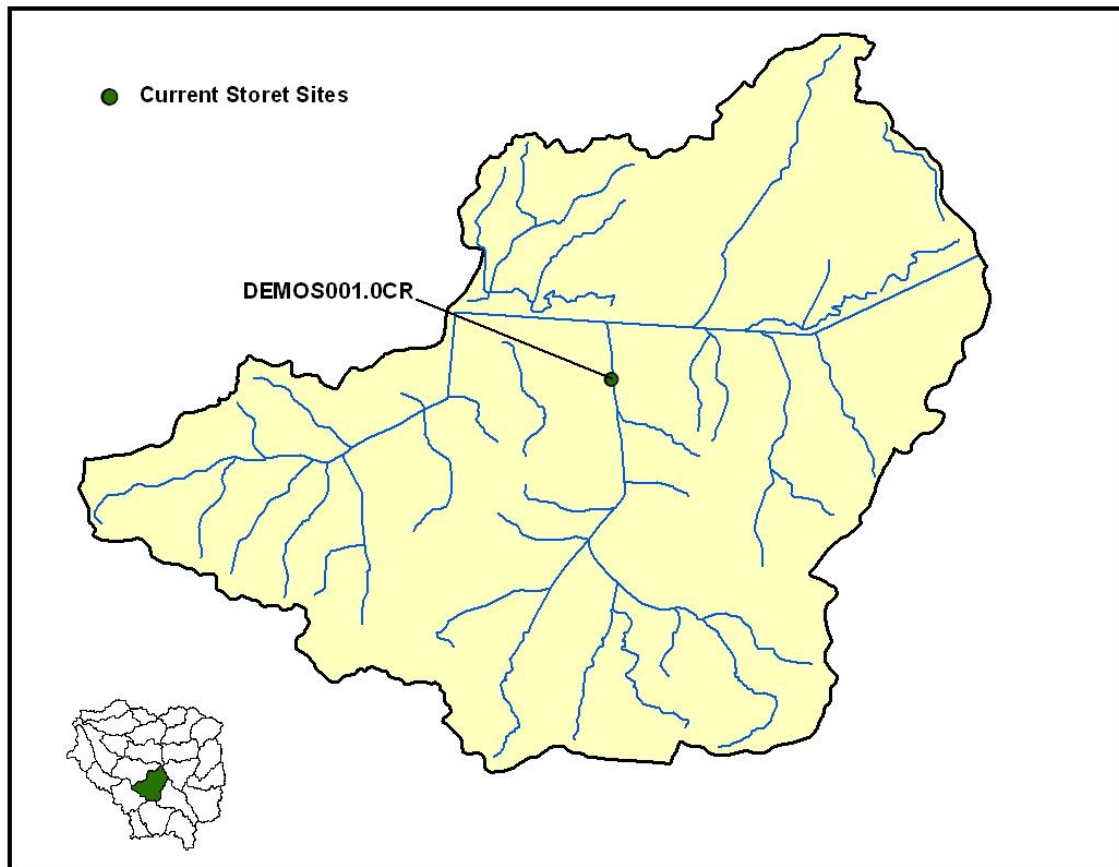
*Table 4-21. Population Estimates in Subwatershed 080102030103.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Atwood	Carroll	1,080	454	417	36	1
Trezevant	Carroll	881	393	354	39	0
<b>Total</b>		<b>1,961</b>	<b>847</b>	<b>771</b>	<b>75</b>	<b>1</b>

*Table 4-22. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030103.*

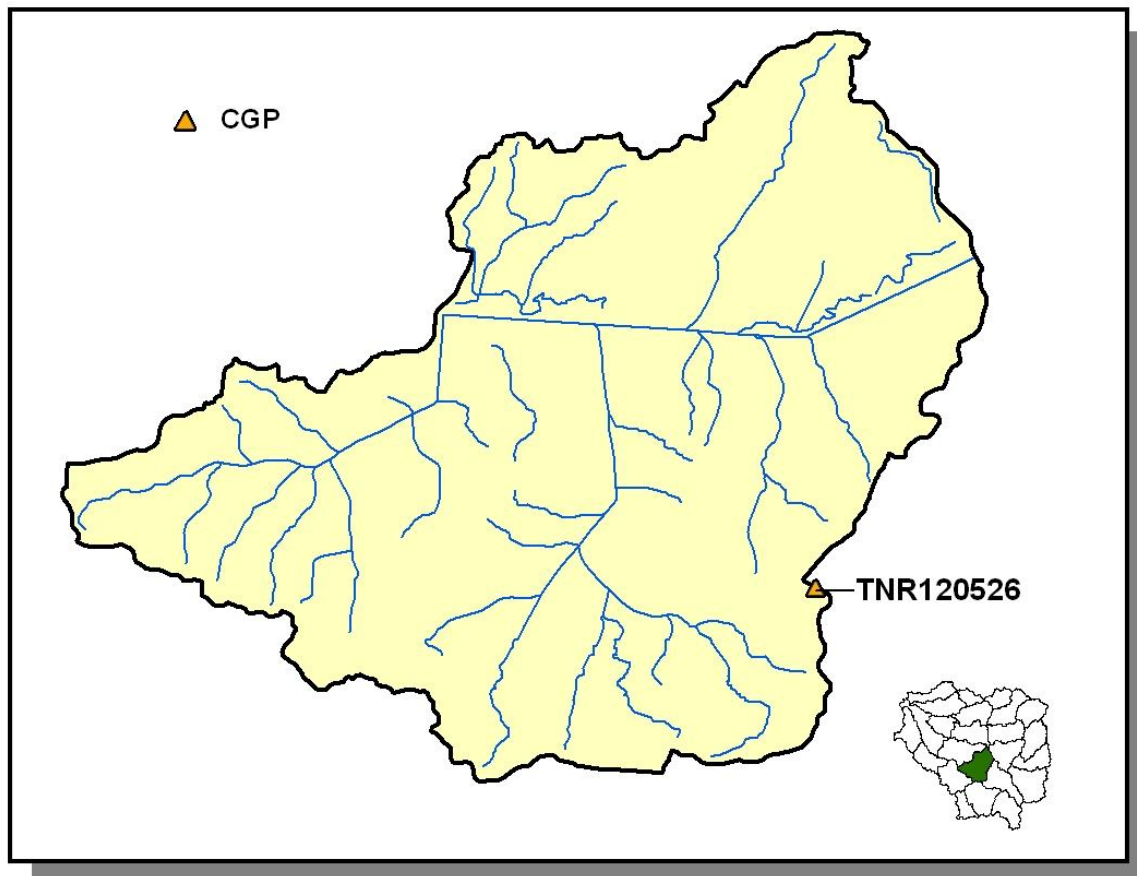
**4.2.C.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations located in subwatershed 080102030103.



**Figure 4-33. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030103.** More information, including site names and locations, is provided in Appendix IV.

**4.2.C.iii. Permitted Activities.**



**Figure 4-34. Location of Permits Issued in Subwatershed 080102030103.** CGP, Construction General Permit .More information, including the names of facilities, is provided in Appendix IV.

**4.2.C.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	
Gibson	9,766	21,779	221	605	7,506	74
Weakley	8,004	17,326	1342	280	44,572	161

**Table 4-23. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0
Gibson	36.4	36.4	2.0	8.6
Weakley	96.1	95.9	6.7	24.6

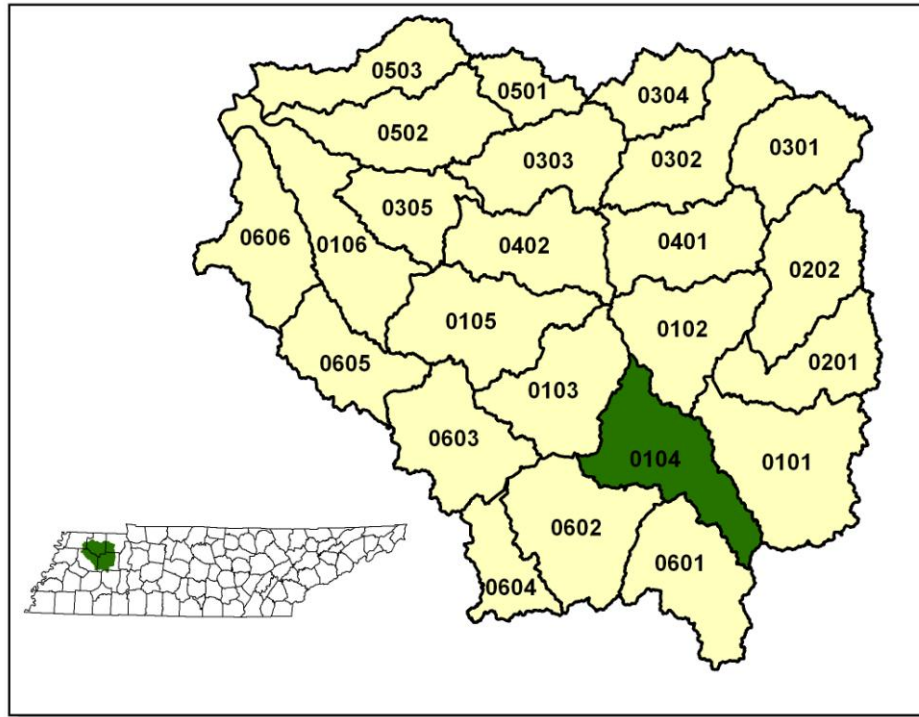
**Table 4-24. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Wheat (Close Grown Cropland)	17.77
Cotton (Row Crops)	9.75
Soybeans (Row Crops)	9.69
Other Cropland not Planted	7.28
Corn (Row Crops)	7.27
Sorghum (Row Crops)	6.38
Legume (Pastureland)	1.47
Conservation Reserve Program Land	1.01
Farmsteads and Ranch Headquarters	0.91
Other Land in Farms	0.76
Grass Forbs Legumes Mixed (Pastureland)	0.68
Legume Grass (Hayland)	0.46
Grass (Pastureland)	0.35
Grass (Hayland)	0.24
Legume (Hayland)	0.11

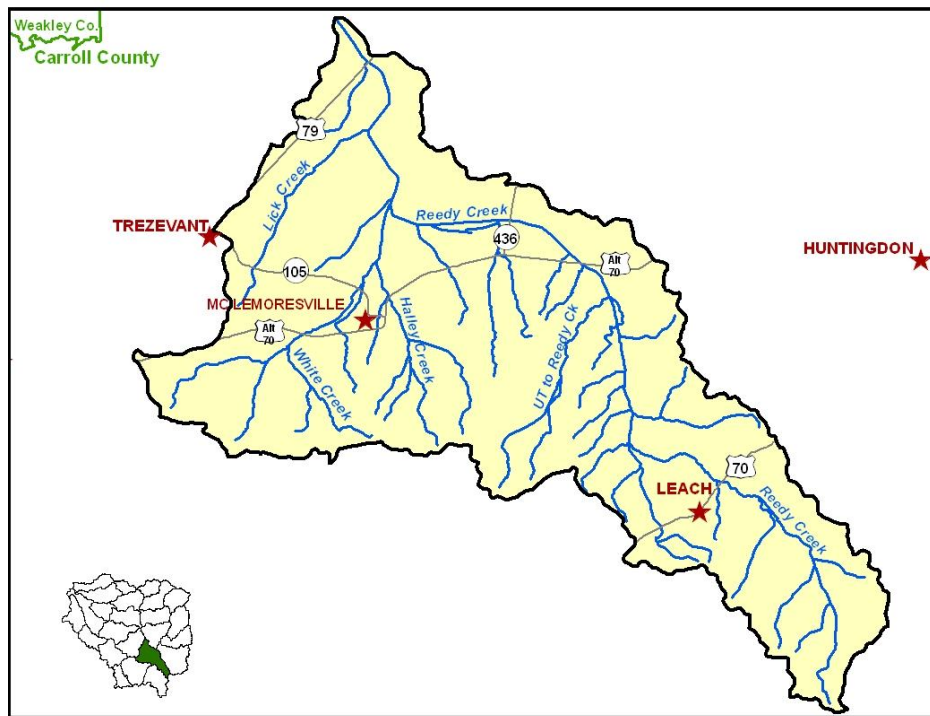
**Table 4-25. Annual Estimated Total Soil Loss in Subwatershed 080102030103.**

**4.2.D. 080102030104 (Reedy Creek).**

**4.2.D.i. General Description.**

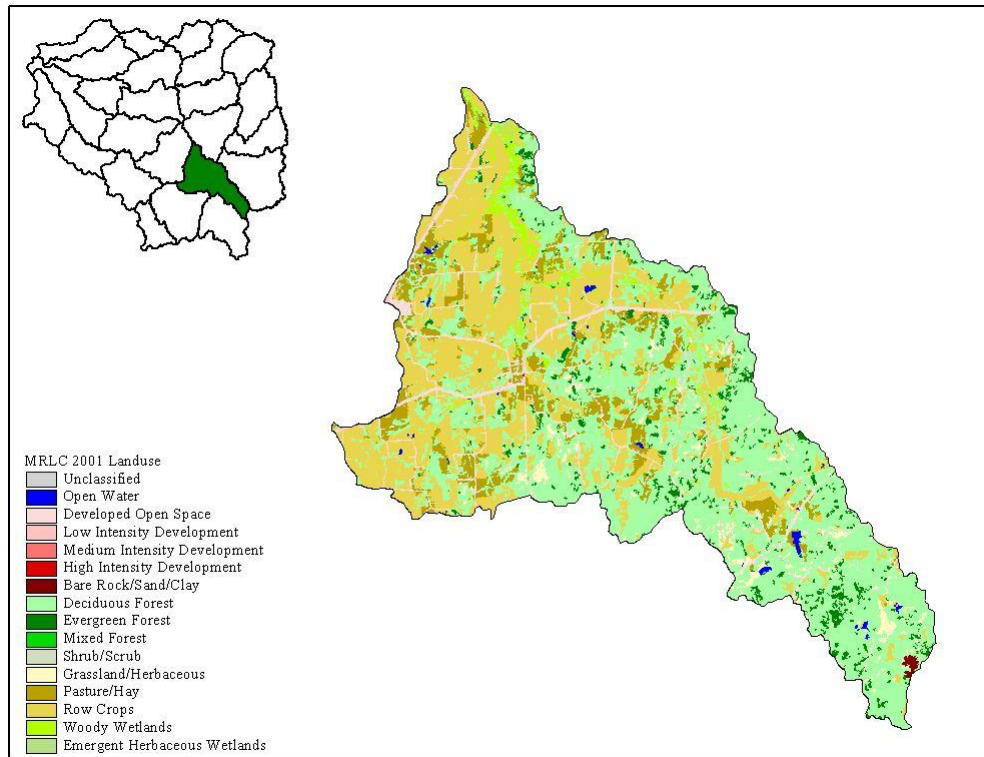


**Figure 4-35. Location of Subwatershed 080102030104.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.

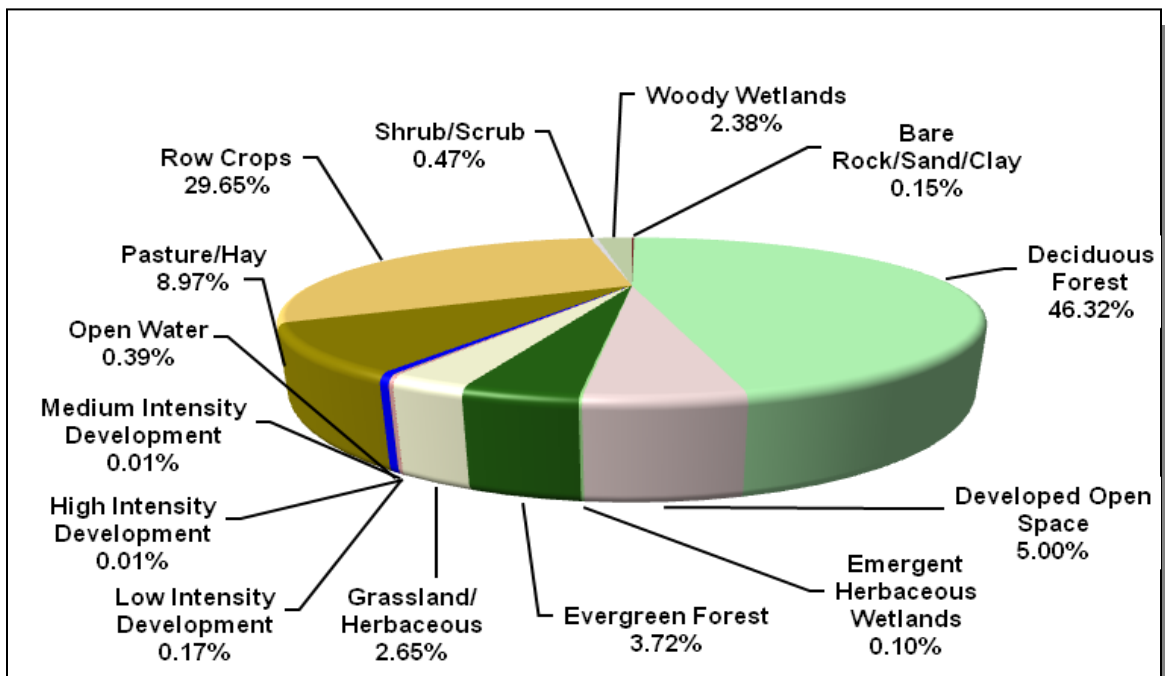


**Figure 4-36. Locational Details of Subwatershed 080102030104.**

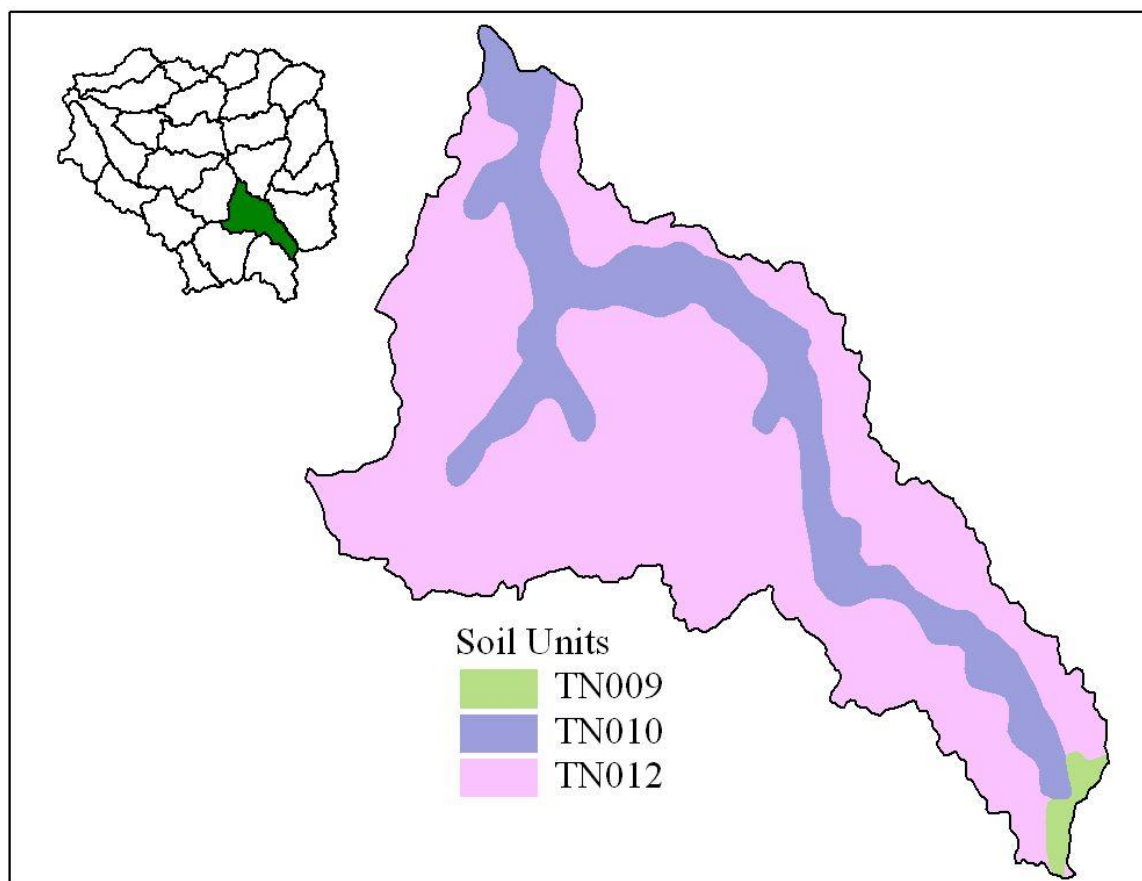




**Figure 4-37. Illustration of Land Use Distribution in Subwatershed 080102030104.**



**Figure 4-38. Land Use Distribution in Subwatershed 080102030104.** More information is provided in Appendix IV.



**Figure 4-39. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030104.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN009	7.00	C	1.30	5.10	Silty Loam	0.43
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN012	1.00	C	2.52	5.13	Silty Loam	0.39

**Table 4-26. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030104.** The definition of "Hydrologic Group" is provided in Appendix IV.

	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	Portion of Watershed (%)	1990	1997	2000	% Change (1990-2000)
Carroll	27,514	28,990	29,475	9.38	2,581	2,719	2,765	7.10

**Table 4-27. Population Estimates in Subwatershed 080102030104.**

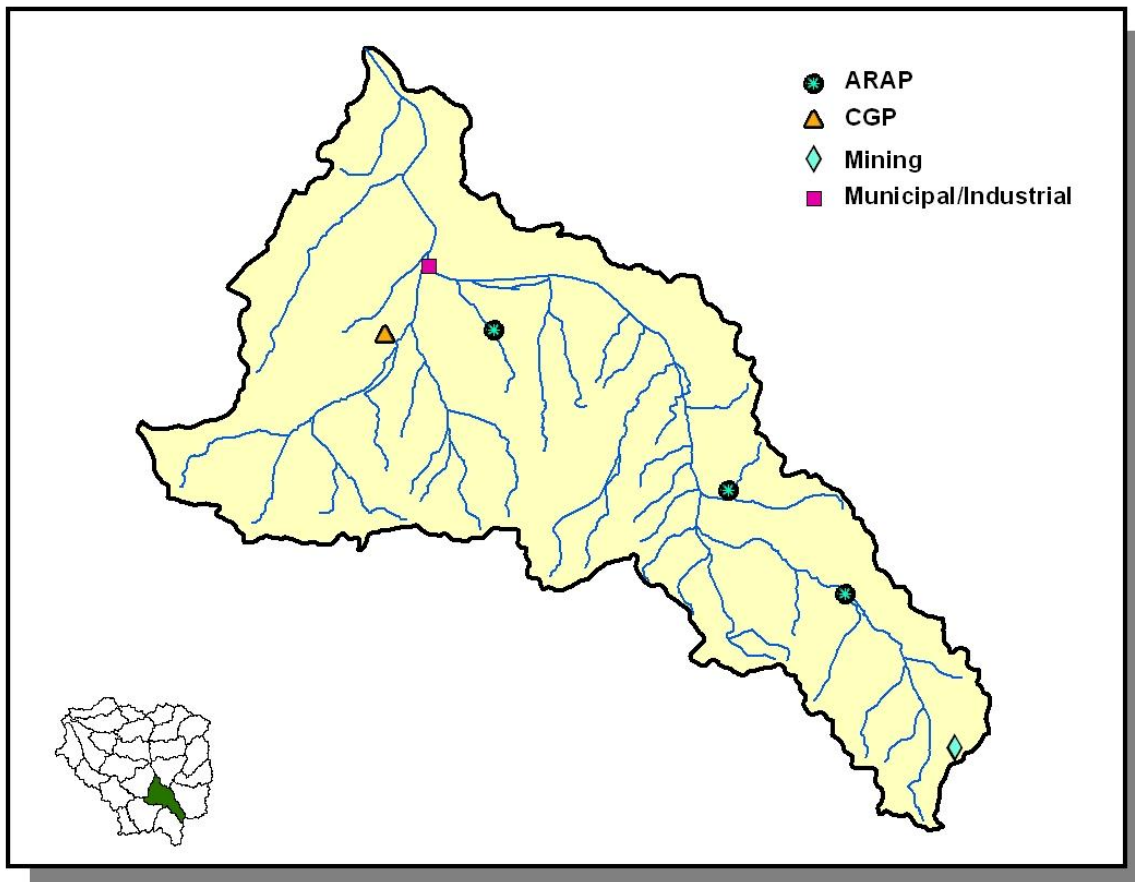
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Atwood	Carroll	1,080	454	417	36	1
McLemoresville	Carroll	273	143	10	133	0
Trezevant	Carroll	881	393	354	39	0
<b>Total</b>		<b>2,234</b>	<b>990</b>	<b>781</b>	<b>208</b>	<b>1</b>

**Table 4-28. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030104.**

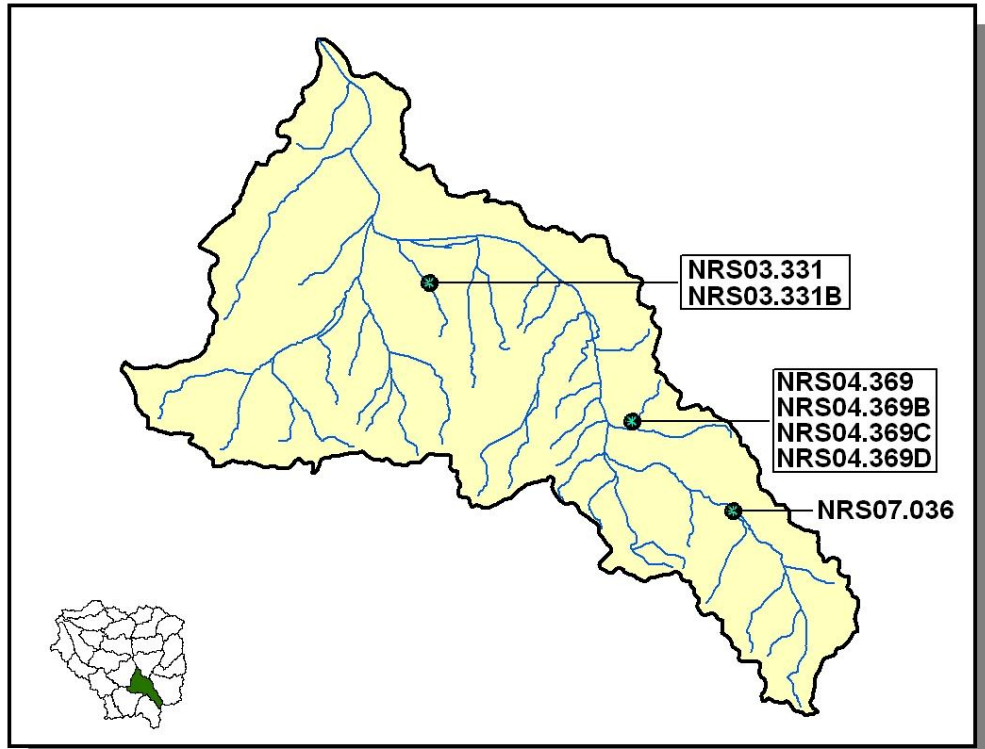
#### **4.2.D.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations or STORET sites located in subwatershed 080102030104.

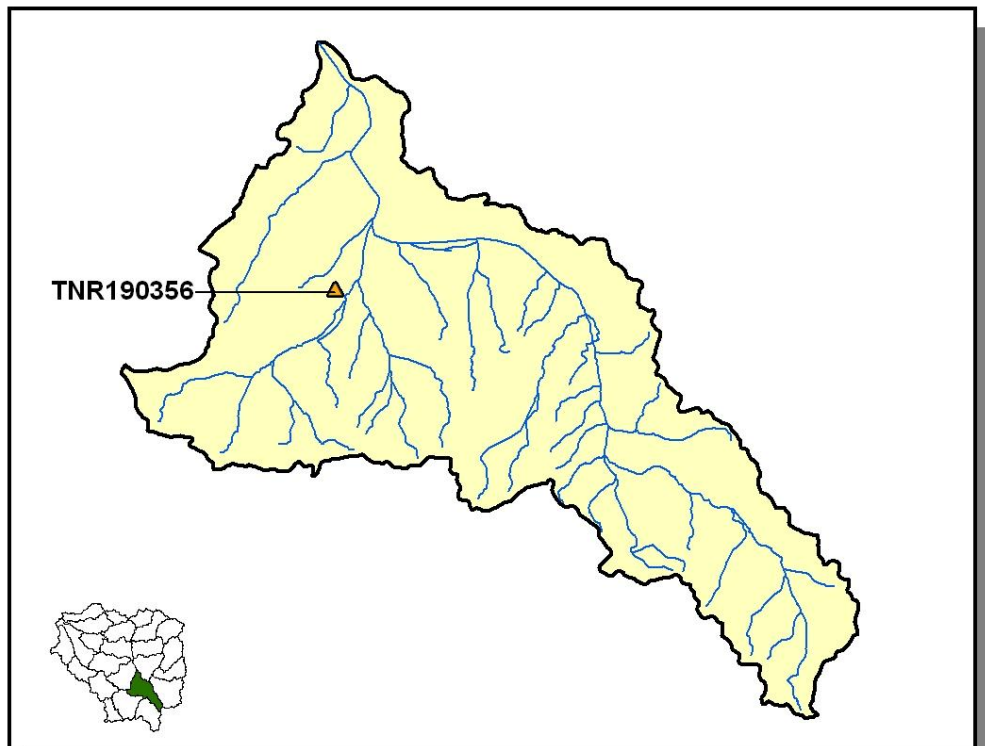
#### **4.2.D.iii. Permitted Activities.**



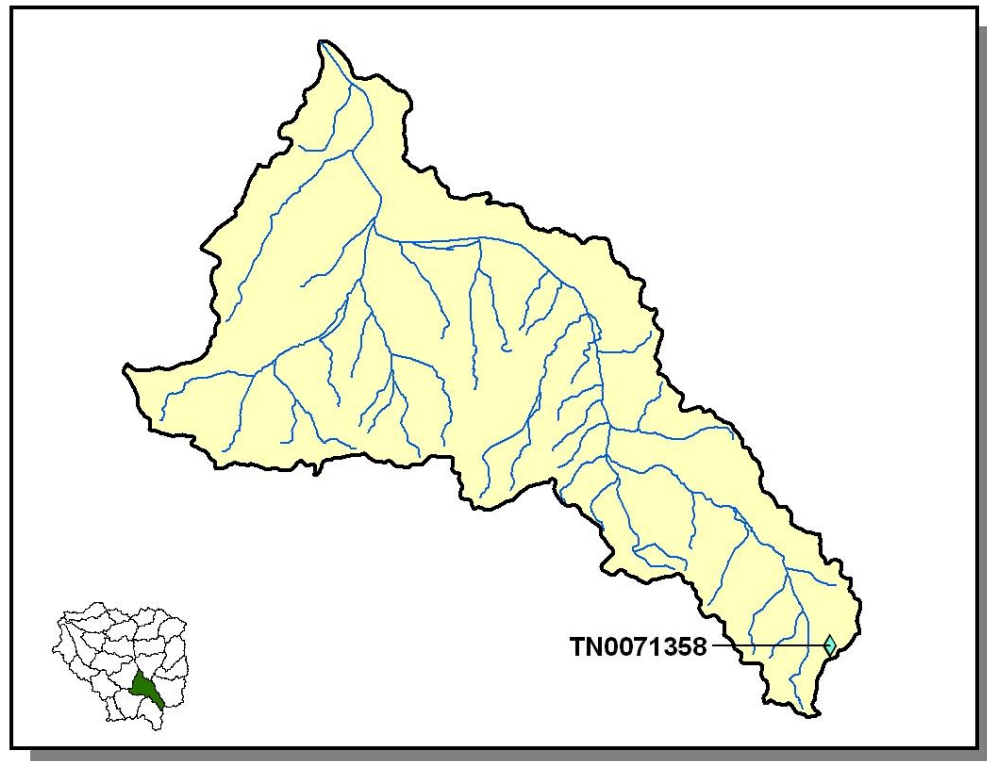
**Figure 4-40. Location of Permits Issued in Subwatershed 080102030104.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-41. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030104.** More information is provided in Appendix IV.

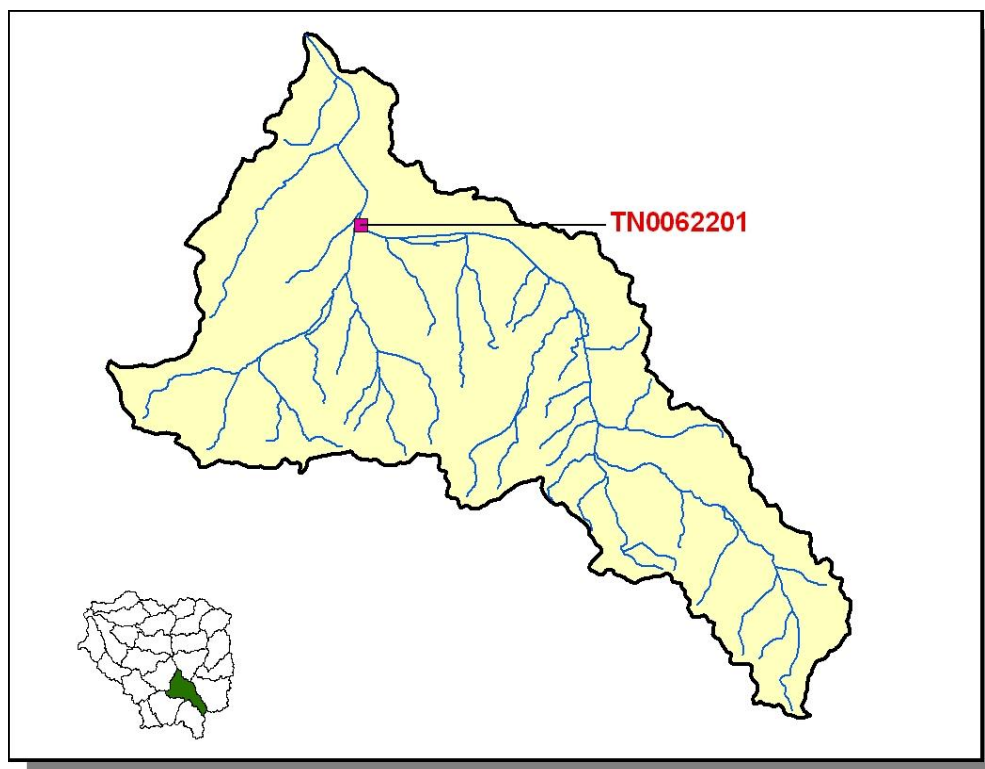


**Figure 4-42. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030104.** More information is provided in Appendix IV.



**Figure 4-43. Location of Permitted Mining Facilities in Subwatershed 080102030104.** More information is provided in Appendix IV.





**Figure 4-44. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030104.** Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the name of the facility is provided in Appendix IV.

PERMIT #	7Q10	DISCHARGE FLOW
TN0062201	2.65	0.2

**Table 4-29. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030104.** Data are in million gallons per day (MGD). Data were obtained from permit files.

PERMIT #	CBOD <sub>5</sub>	CBOD % REMOVAL	AMMONIA AS N (TOTAL)	FECAL COLIFORM	TRC	DO	pH	TSS	SS
TN0062201	X	X	X	X	X	X	X	X	X

**Table 4-30. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030104.** CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-day); TRC, Total Residual Chlorine; DO, Dissolved Oxygen; TSS, Total Suspended Solids; SS, Settleable Solids.

**4.2.D.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	

**Table 4-31. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0

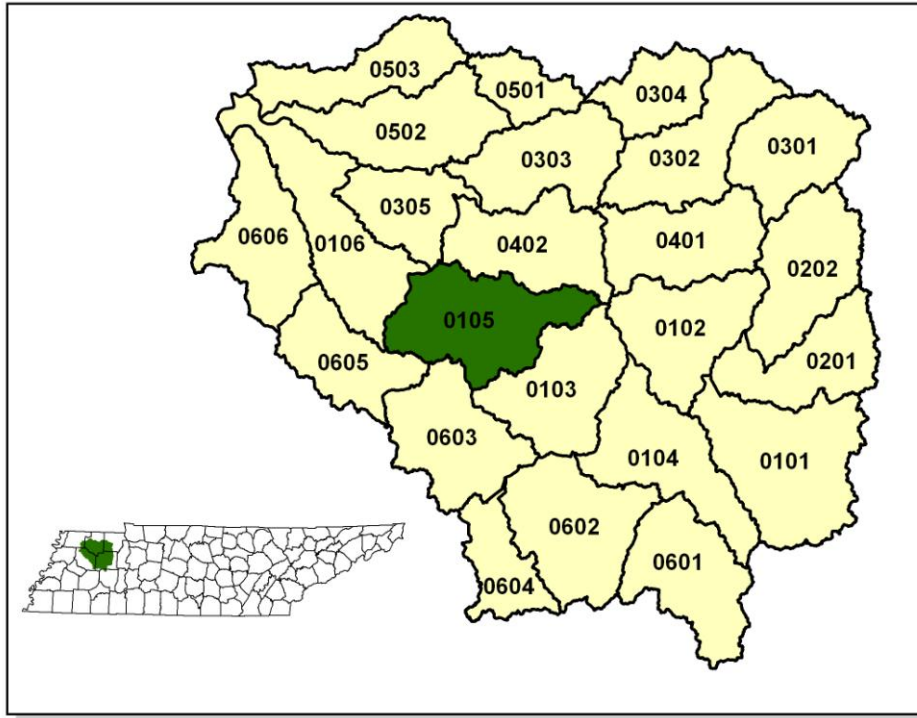
**Table 4-32. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Wheat (Close Grown Cropland)	18.5
Soybeans (Row Crops)	10.2
Other Cropland not Planted	9.50
Cotton (Row Crops)	7.58
Corn (Row Crops)	5.95
Conservation Reserve Program Land	1.23
Farmsteads and Ranch Headquarters	1.12
Other Land in Farms	0.59
Grass Forbs Legumes Mixed (Pastureland)	0.58
Legume Grass (Hayland)	0.46
Grass (Pastureland)	0.40
Grass (Hayland)	0.21
Legume (Hayland)	0.07

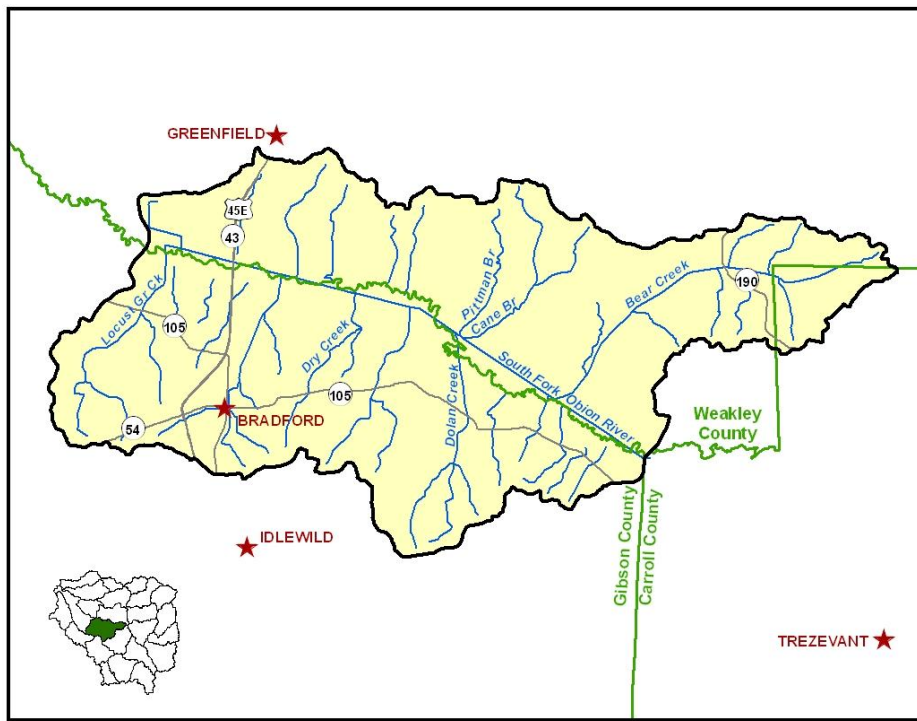
**Table 4-33. Annual Estimated Total Soil Loss in Subwatershed 080102030104.**

#### 4.2.E. 080102030105 (South Fork Obion River).

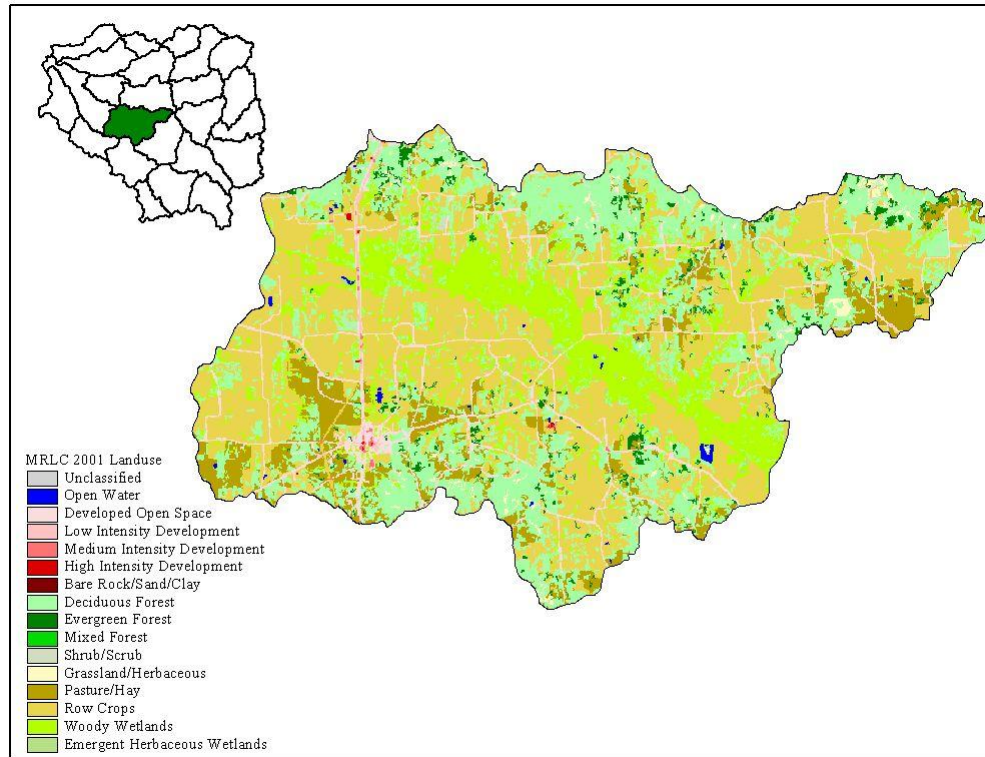
##### 4.2.E.i General Description.



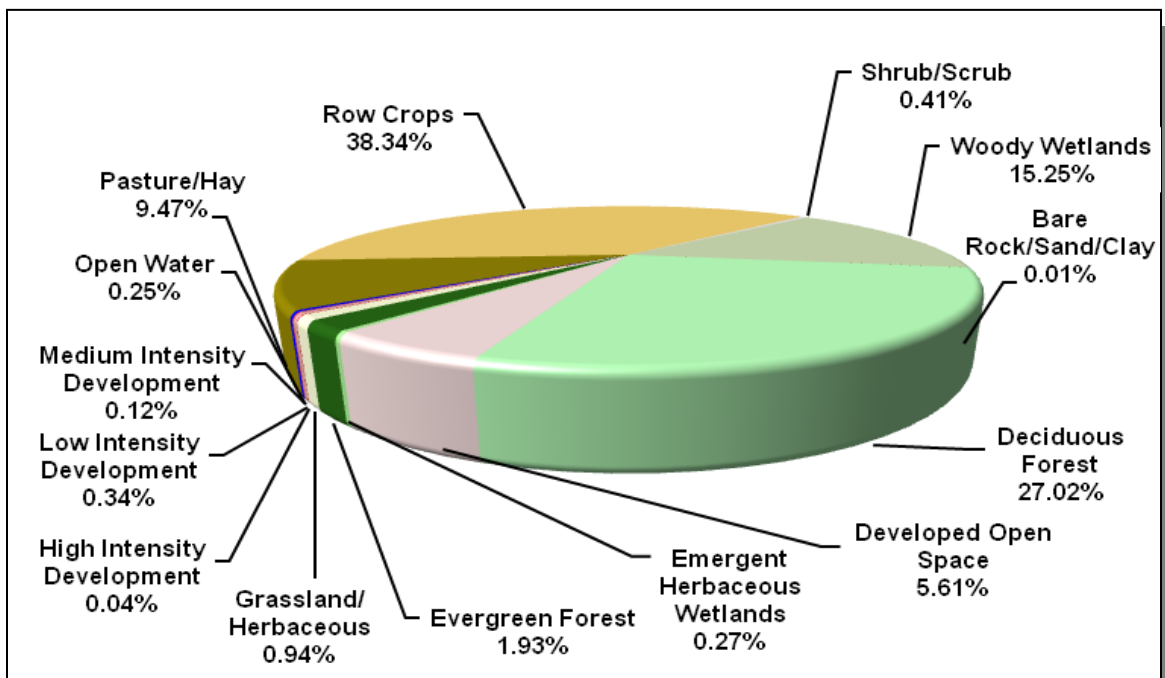
**Figure 4-45. Location of Subwatershed 080102030105.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



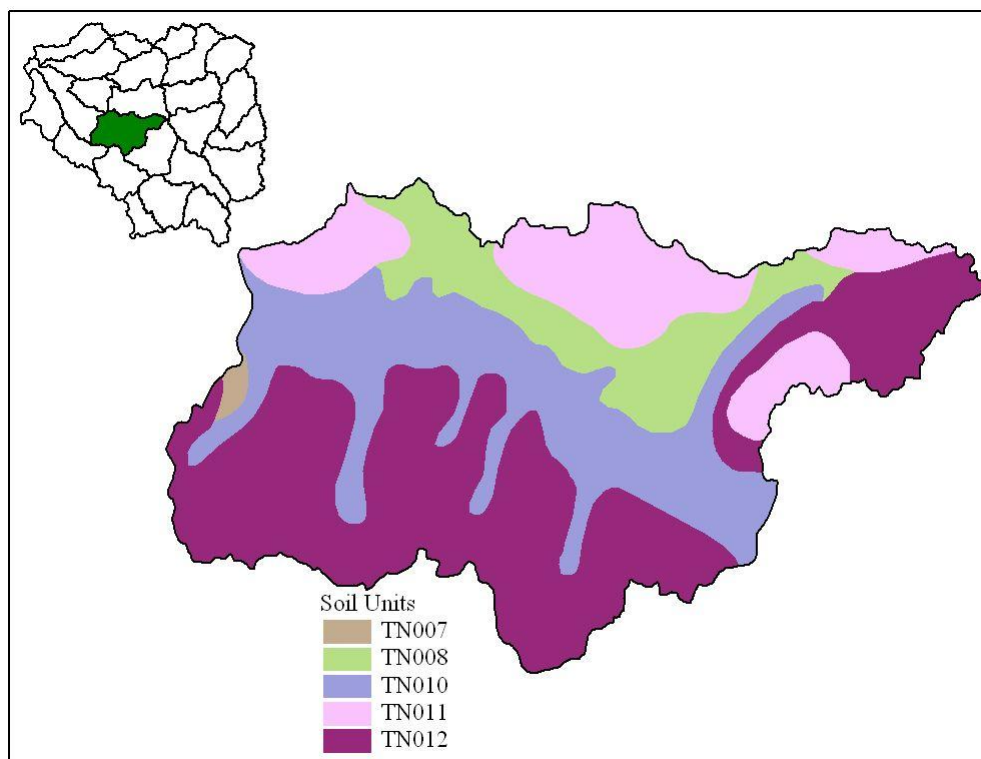
**Figure 4-46. Locational Details of Subwatershed 080102030105.**



**Figure 4-47. Illustration of Land Use Distribution in Subwatershed 080102030105.**



**Figure 4-48. Land Use Distribution in Subwatershed 080102030105.** More information is provided in Appendix IV.



**Figure 4-49. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030105.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40
TN012	1.00	C	2.52	5.13	Silty Loam	0.39

**Table 4-34. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030105.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Carroll	27,514	28,990	29,475	0.30	84	88	90	7.10
Gibson	46,315	48,083	48,152	5.66	2,621	2,722	2,725	4.00
Weakley	31,972	32,808	34,895	4.30	1,374	1,410	1,500	9.20
<b>Total</b>	<b>105,801</b>	<b>109,881</b>	<b>112,522</b>		<b>4,079</b>	<b>4,220</b>	<b>4,315</b>	<b>5.80</b>

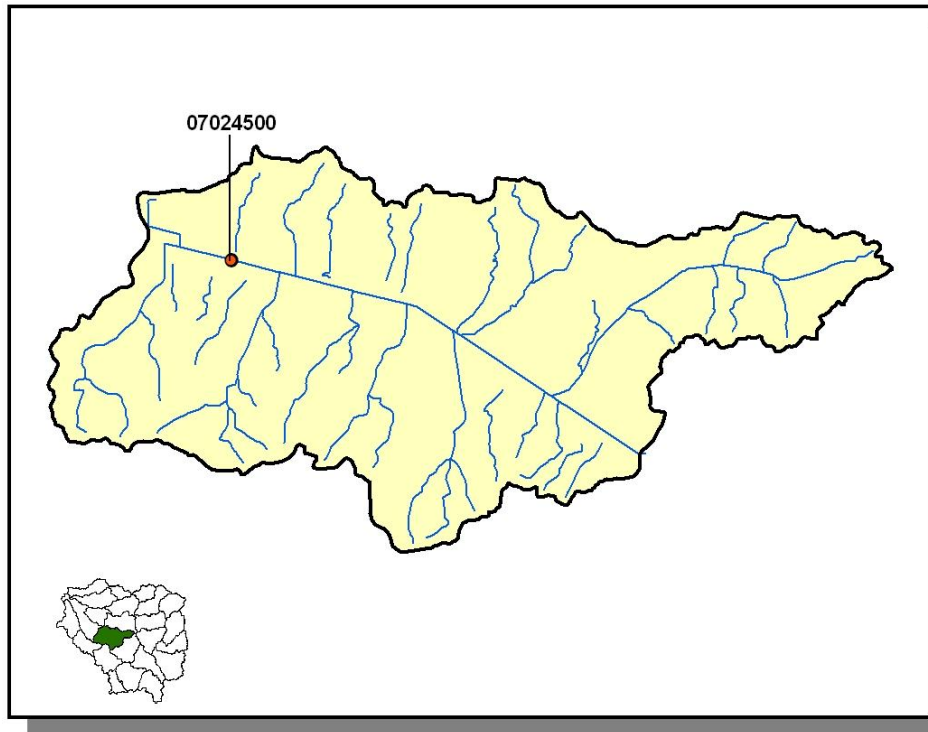
*Table 4-35. Population Estimates in Subwatershed 080102030105.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Greenfield	Weakley	2,105	949	900	46	3
Bradford	Gibson	1,154	503	480	23	0
<b>Total</b>		<b>3,259</b>	<b>1,452</b>	<b>1,380</b>	<b>69</b>	<b>3</b>

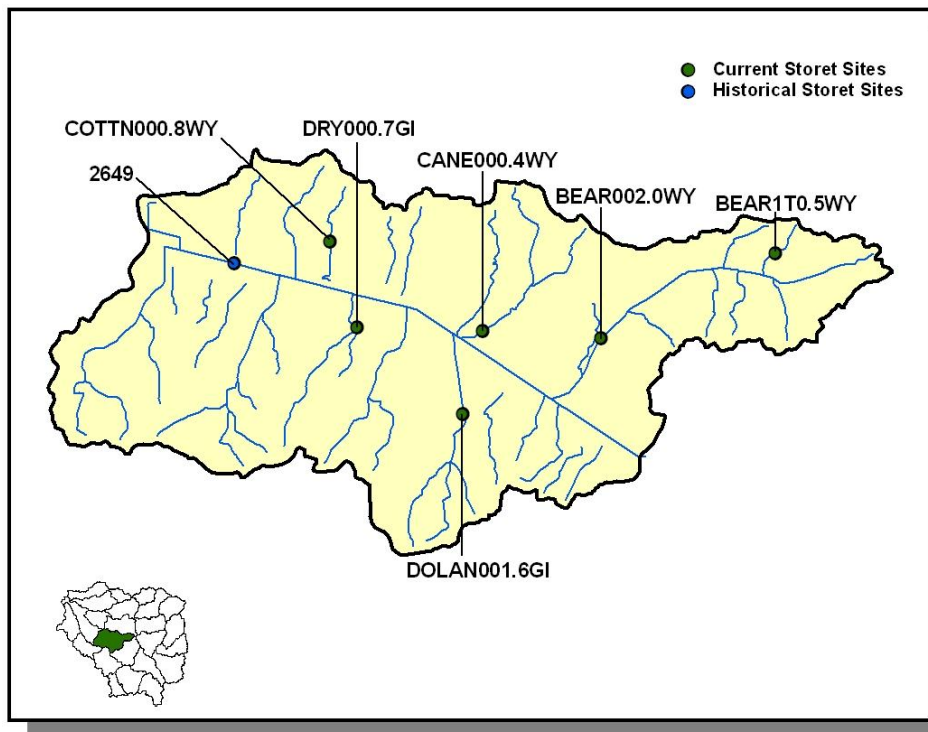
*Table 4-36. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030105.*



**4.2.E.ii. USGS Gaging Stations and STORET Sites.**

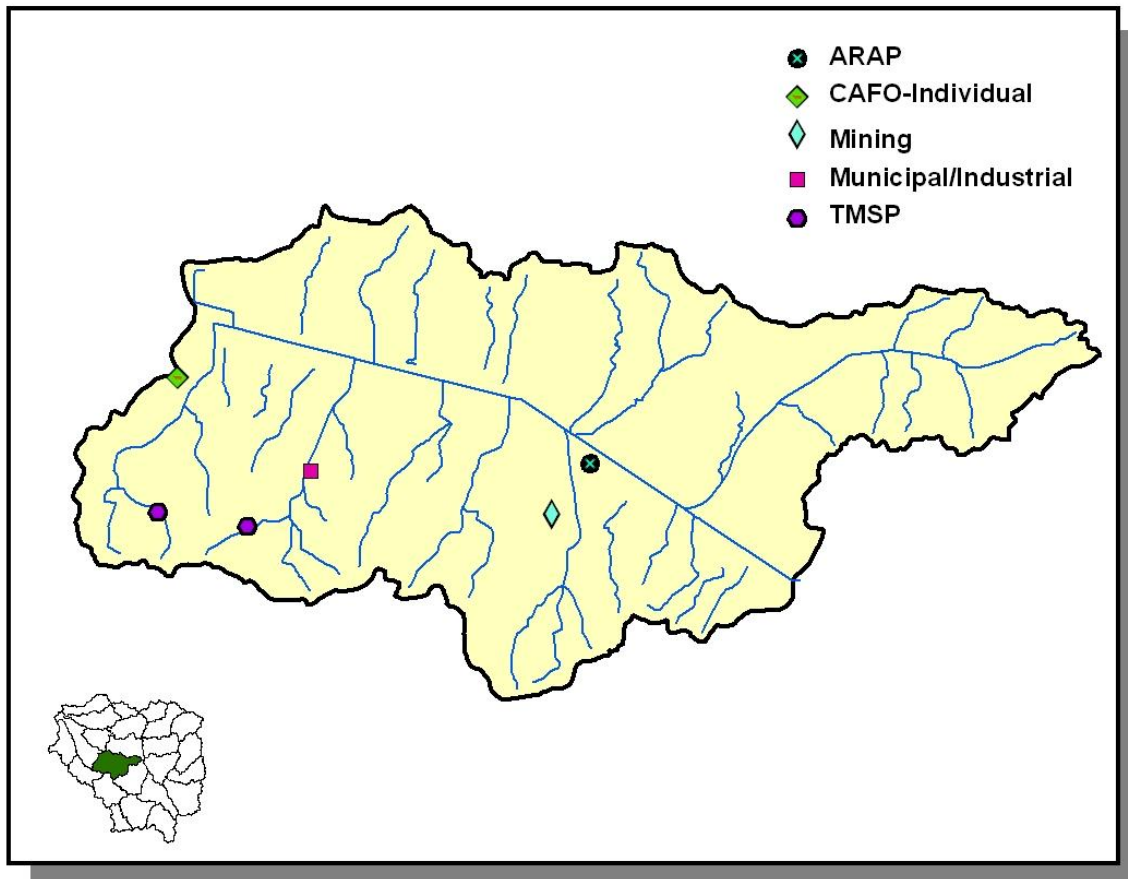


**Figure 4-50. Location of USGS Continuous Record Gaging Stations in Subwatershed 080102030105.** More information is provided in Appendix IV.

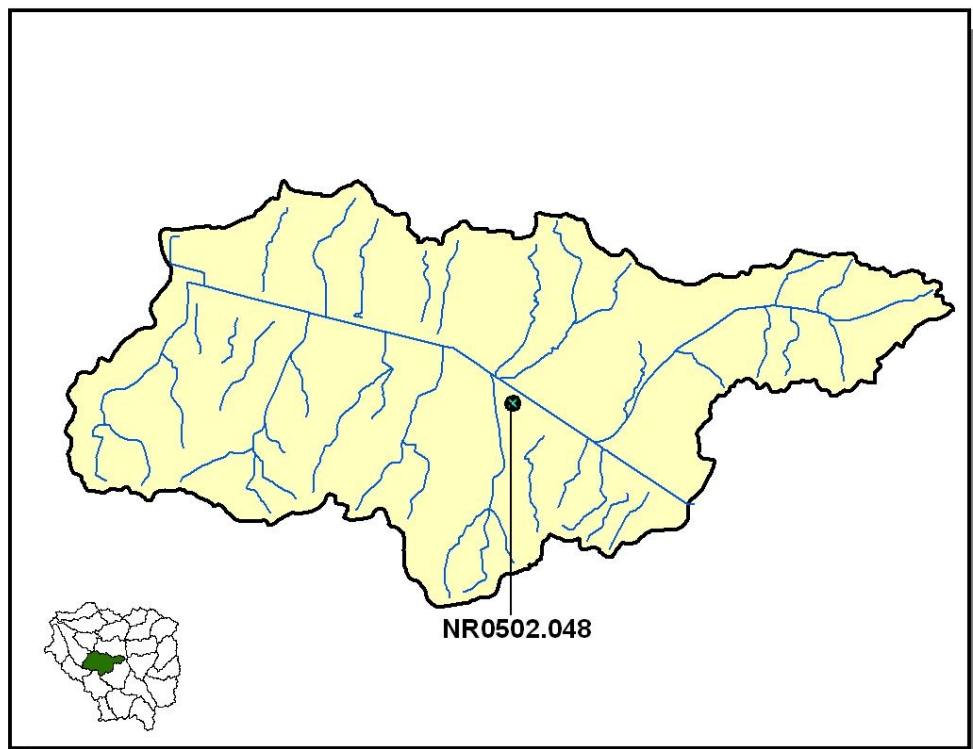


**Figure 4-51. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030105.** More information, including site names and locations, is provided in Appendix IV.

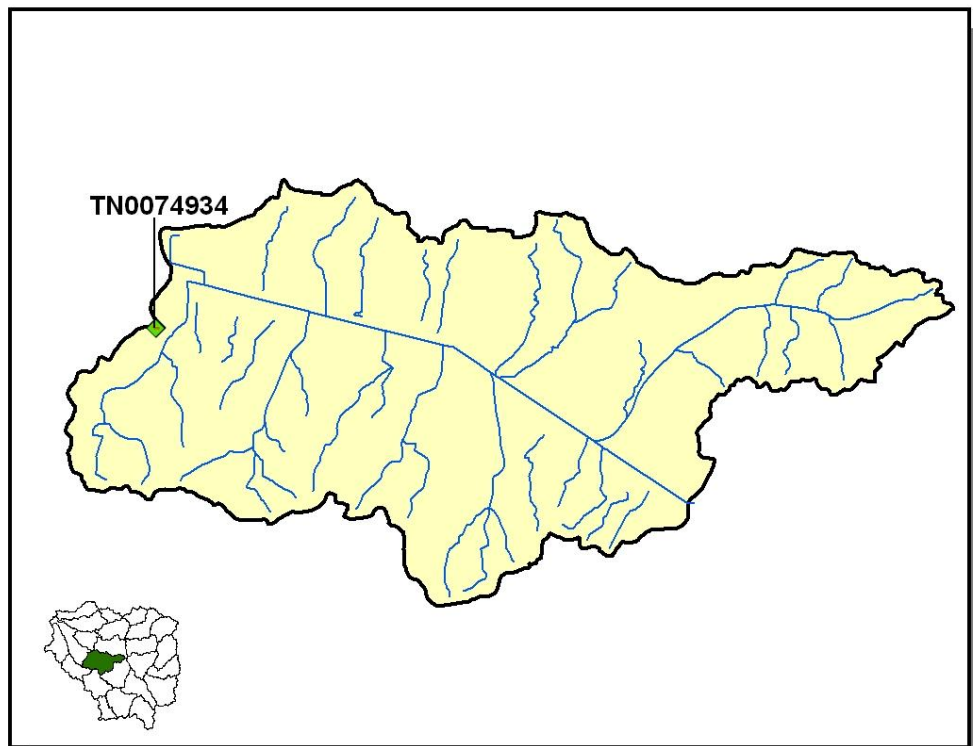
**4.2.E.iii. Permitted Activities.**



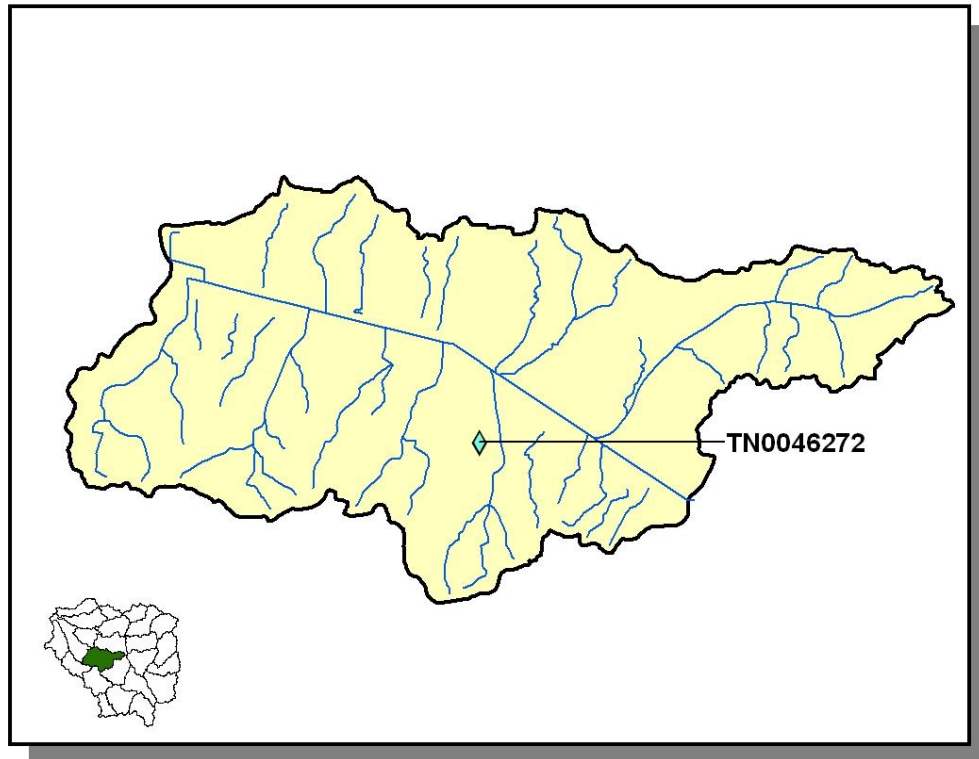
**Figure 4-52. Location of Permits Issued in Subwatershed 080102030105.** More information, including the names of facilities, is provided in Appendix IV.



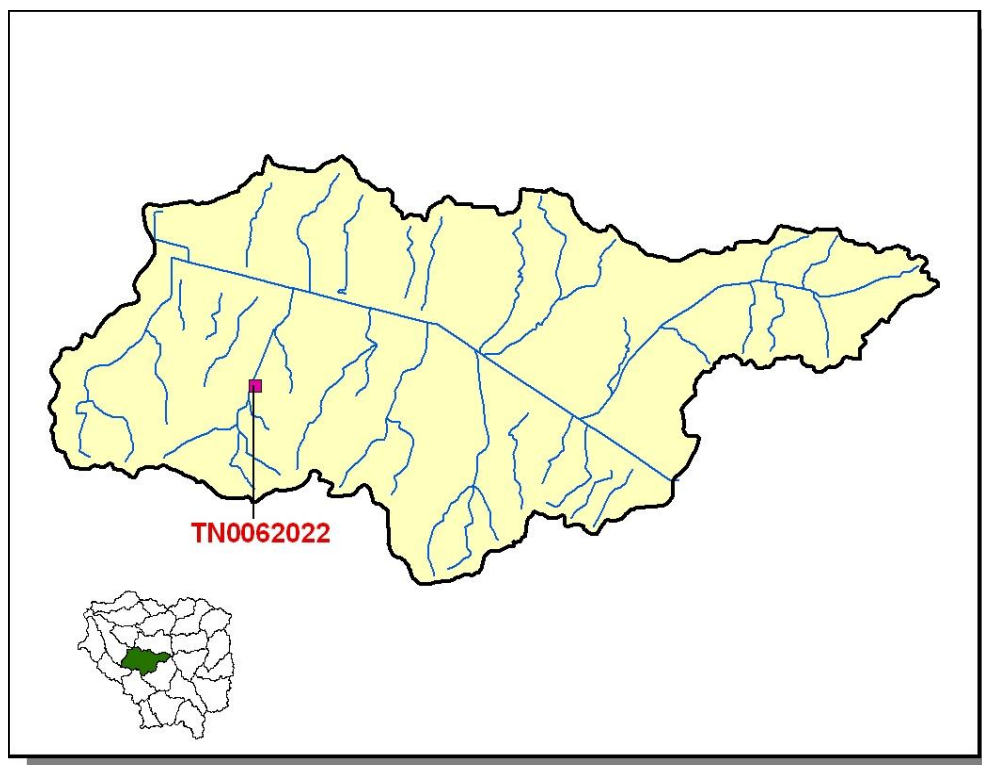
**Figure 4-53. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030105.** More information is provided in Appendix IV.



**Figure 4-54. Location of CAFO (Concentrated Animal Feed Operation) Permit Sites in Subwatershed 080102030105.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-55. Location of Permitted Mining Facilities in Subwatershed 080102030105.** More information is provided in Appendix IV.



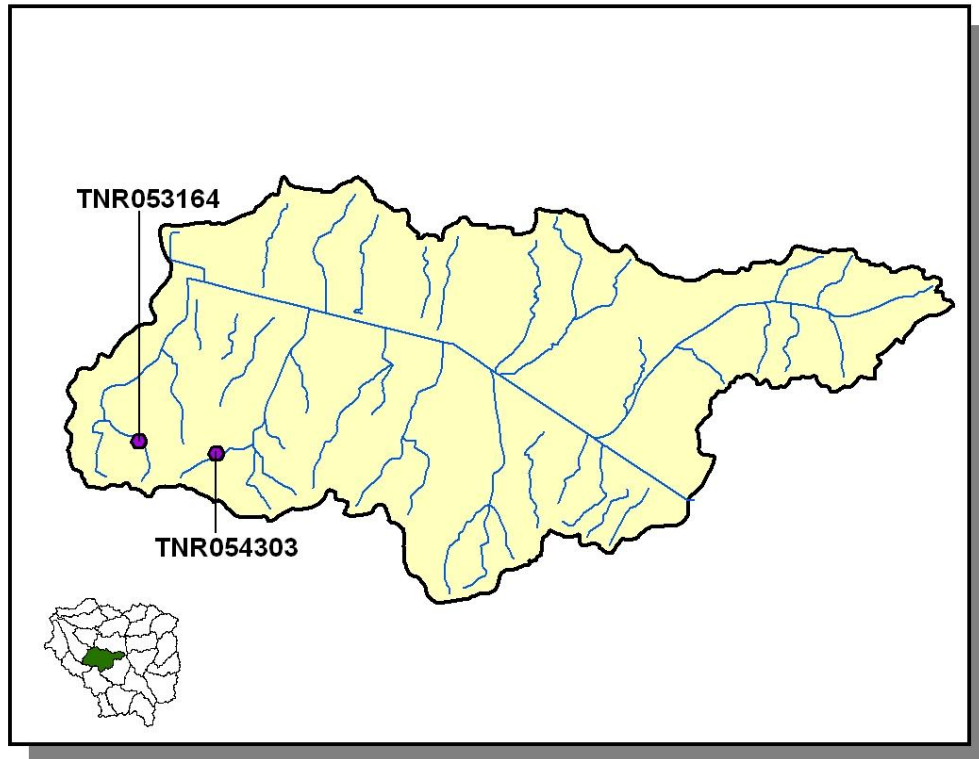
**Figure 4-56. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030105.** Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the name of the facility is provided in Appendix IV.

PERMIT #	7Q10	DISCHARGE FLOW
TN0062022	52.1	0.29

**Table 4-37. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030105.** Data are in million gallons per day (MGD). Data were obtained from permit files.

PERMIT #	BOD <sub>5</sub>	BOD % REMOVAL	FLOW	E. coli	TRC	DO	pH	TSS	SS
TN0062022	X	X	X	X	X	X	X	X	X

**Table 4-38. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030105.** BOD<sub>5</sub>, Biochemical Oxygen Demand (5-day); TRC, Total Residual Chlorine; DO, Dissolved Oxygen; TSS, Total Suspended Solids; SS, Settleable Solids.



**Figure 4-57. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030105.** More information is provided in Appendix IV.



**4.2.E.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	
Gibson	9,766	21,779	221	605	7,506	74
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-39. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0
Gibson	36.4	36.4	2.0	8.6
Weakley	96.1	95.9	6.7	24.6

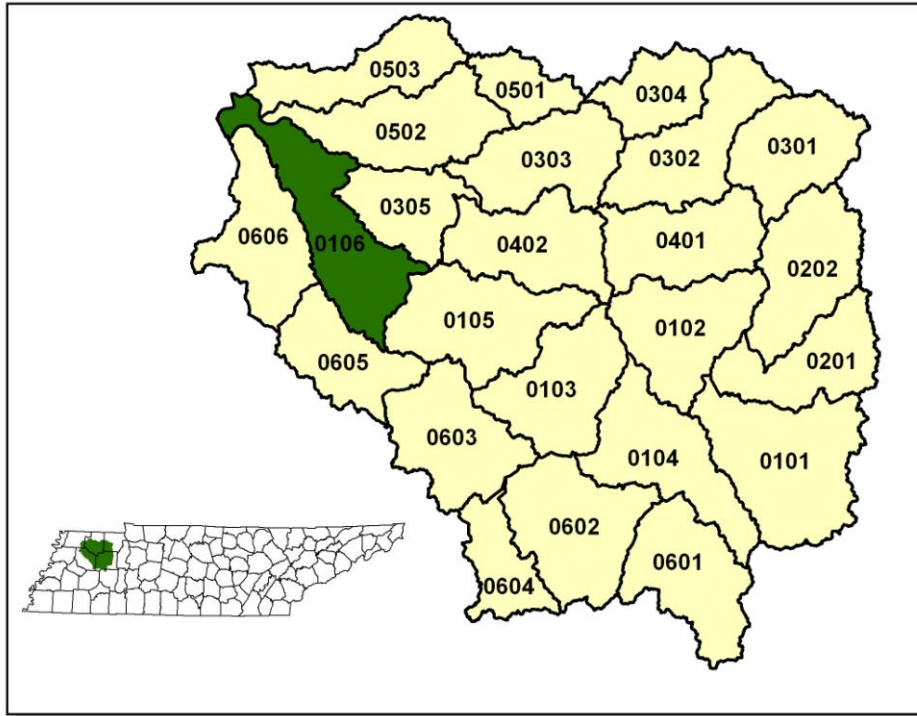
**Table 4-40. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Cotton (Row Crops)	16.72
Wheat (Close Grown Cropland)	10.6
Corn (Row Crops)	9.85
Soybeans (Row Crops)	8.25
Sorghum (Row Crops)	6.38
Other Cropland not Planted	2.43
Legume (Pastureland)	1.47
Other Land in Farms	1.30
Grass Forbs Legumes Mixed (Pastureland)	0.97
Conservation Reserve Program Land	0.47
Legume (Hayland)	0.46
Legume Grass (Hayland)	0.46
Farmsteads and Ranch Headquarters	0.42
Grass (Hayland)	0.29
Grass (Pastureland)	0.22

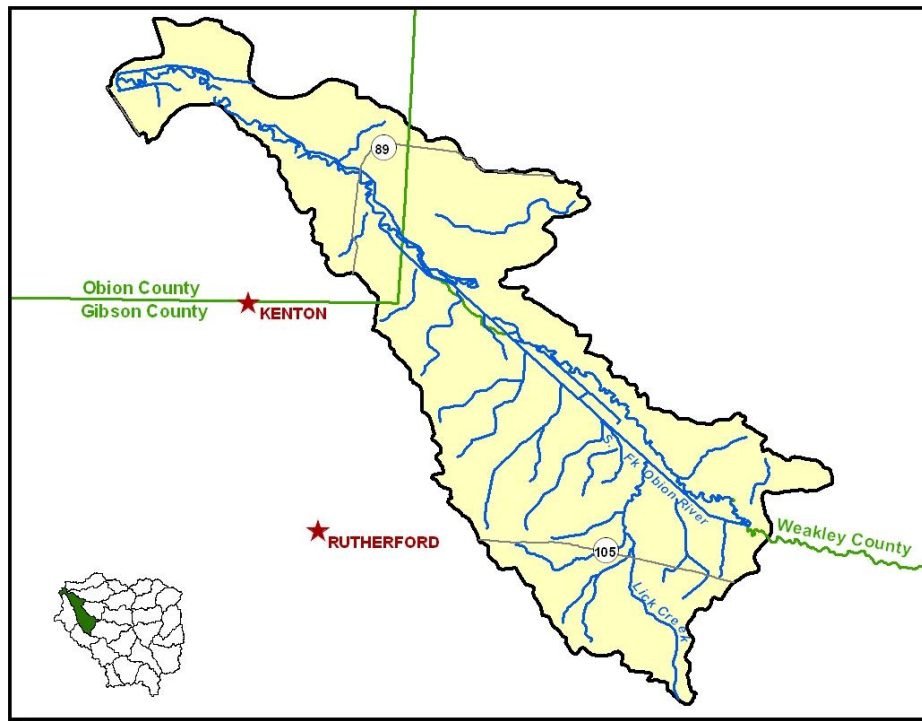
**Table 4-41. Annual Estimated Total Soil Loss in Subwatershed 080102030105.**

#### 4.2.F. 080102030106 (South Fork Obion River).

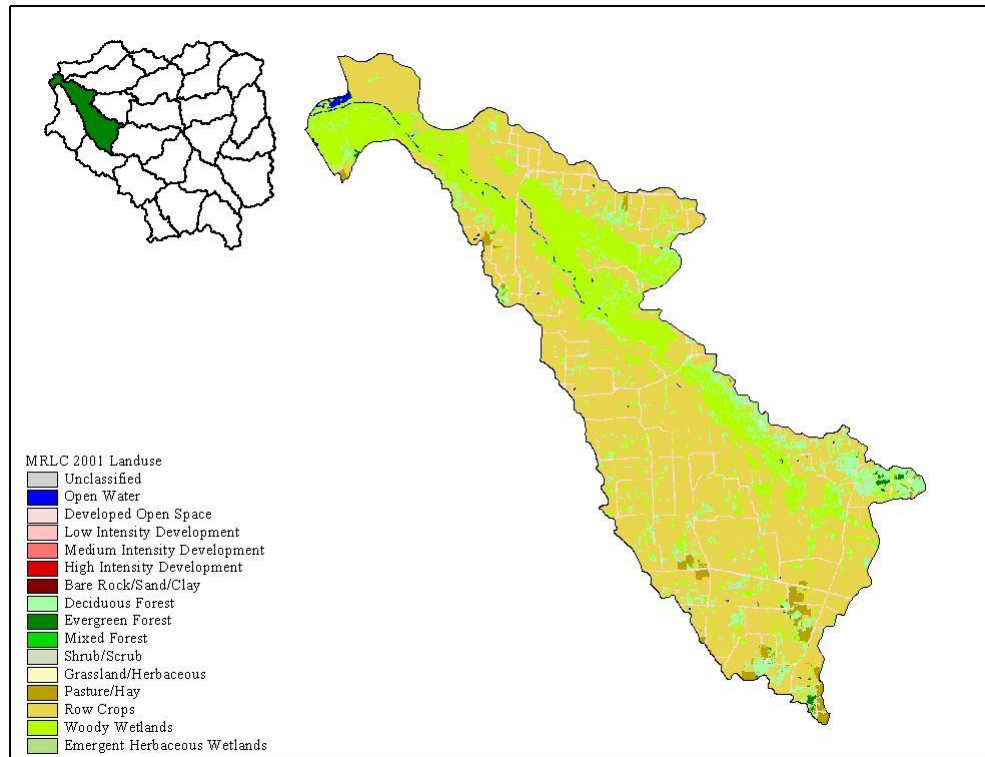
##### 4.2.F.i. General Description.



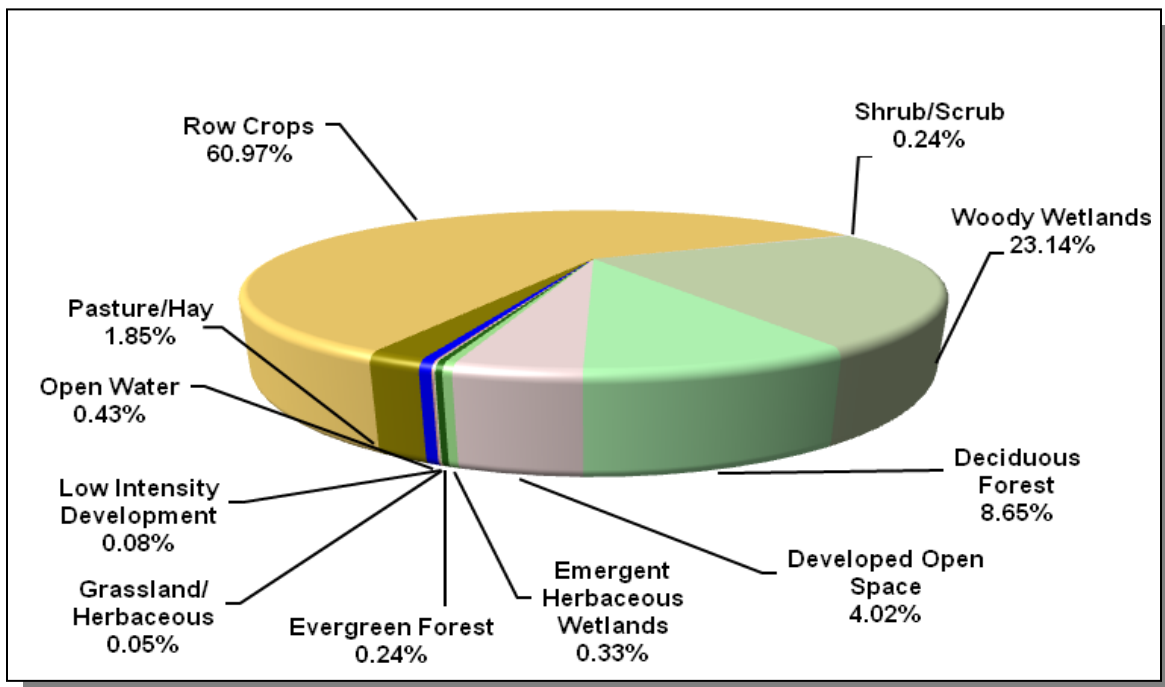
**Figure 4-58. Location of Subwatershed 080102030106.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



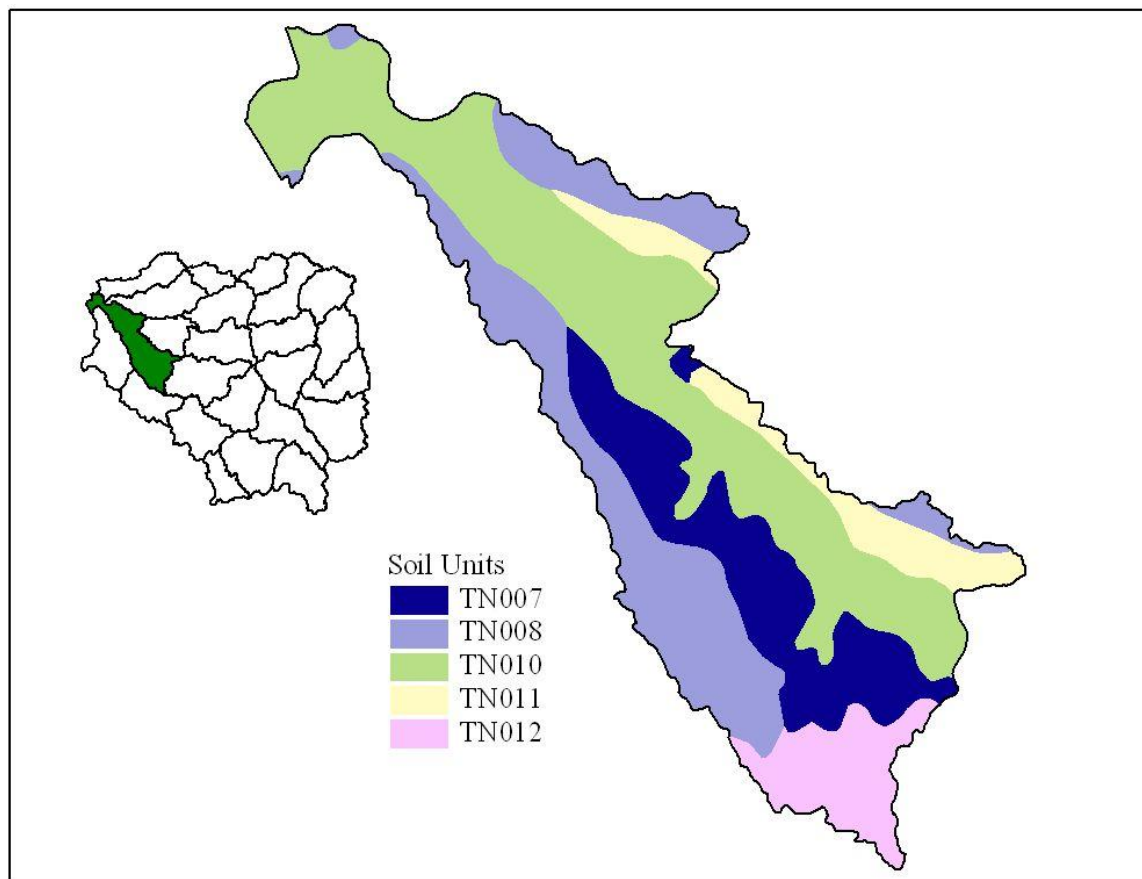
**Figure 4-59. Locational Details of Subwatershed 080102030106.**



**Figure 4-60. Illustration of Land Use Distribution in Subwatershed 080102030106.**



**Figure 4-61. Land Use Distribution in Subwatershed 080102030106.** More information is provided in Appendix IV.



**Figure 4-62. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030106.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40
TN012	1.00	C	2.52	5.13	Silty Loam	0.39

**Table 4-42. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030106.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Gibson	46,315	48,083	48,152	5.90	2,733	2,838	2,842	4.00
Obion	31,717	32,069	32,450	2.67	848	857	867	2.20
Weakley	31,972	32,808	34,895	2.03	650	667	709	9.10
<b>Total</b>	<b>110,004</b>	<b>112,960</b>	<b>115,497</b>		<b>4,231</b>	<b>4,362</b>	<b>4,418</b>	<b>4.40</b>

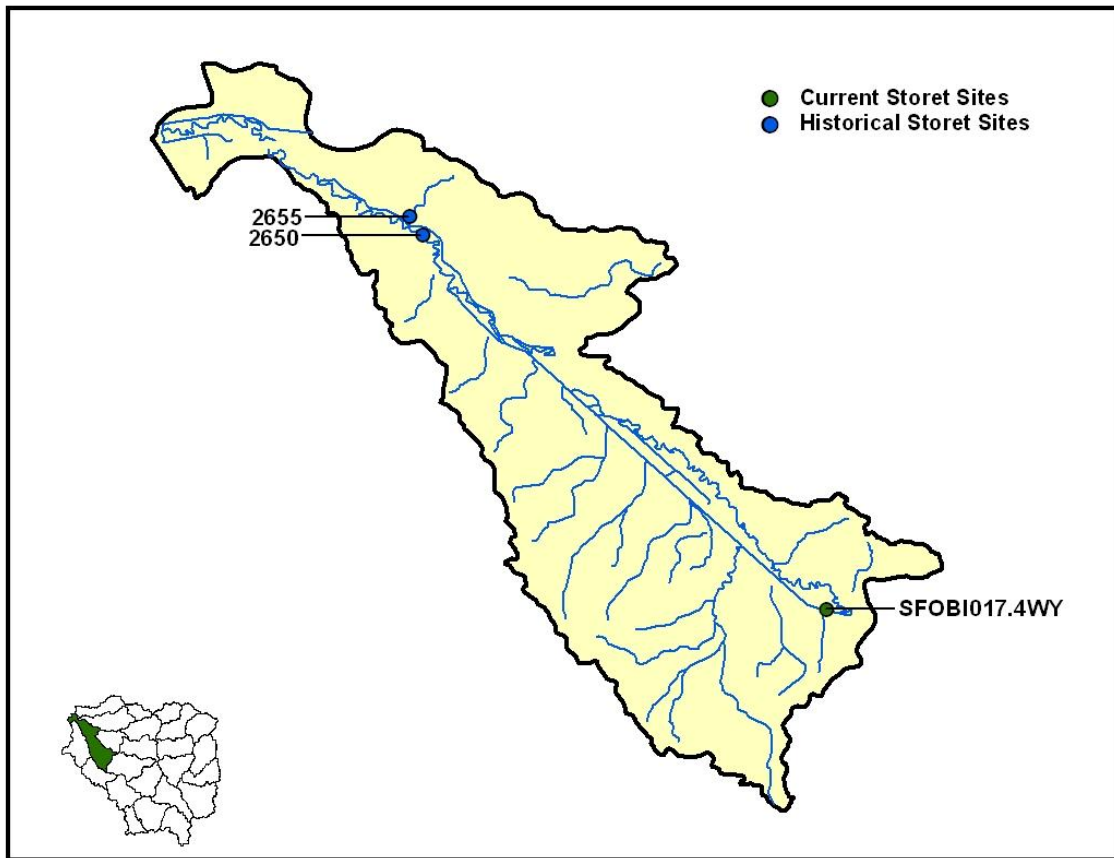
**Table 4-43. Population Estimates in Subwatershed 080102030106.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Greenfield	Weakley	2,105	949	900	46	3

**Table 4-44. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030106.**

**4.2.F.ii. USGS Gaging Stations and STORET Sites.**

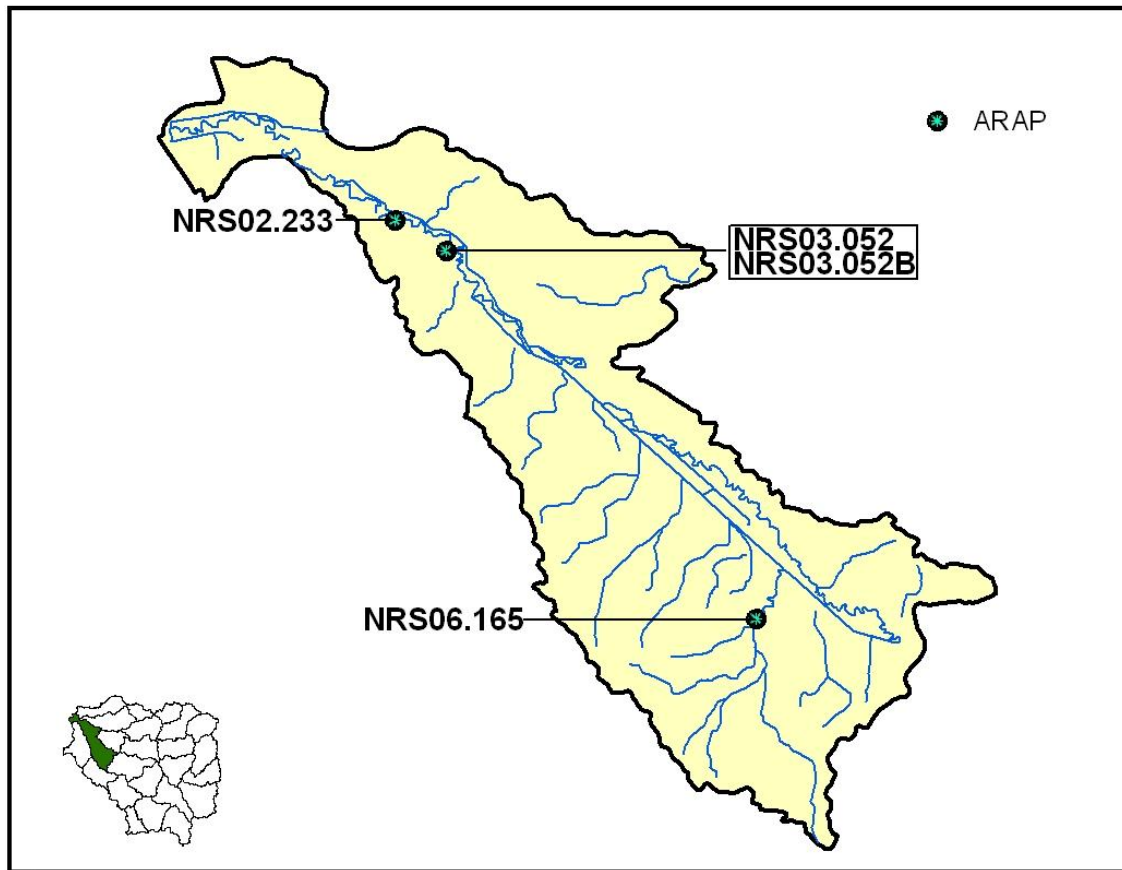
There are no USGS continuous record gaging stations located in subwatershed 080102030106.



**Figure 4-63. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030106.** More information, including site names and locations, is provided in Appendix IV.



**4.2.F.iii. Permitted Activities.**



**Figure 4-64. Location of Permits Issued in Subwatershed 080102030106.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.F.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Gibson	9,766	21,779	221	605	7,506	74
Obion	8,033	18,503	118	7	21,149	205
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-45. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Gibson	36.4	36.4	2.0	8.6
Obion	67.6	67.6	4.4	20.8
Weakley	96.1	95.9	6.7	24.6

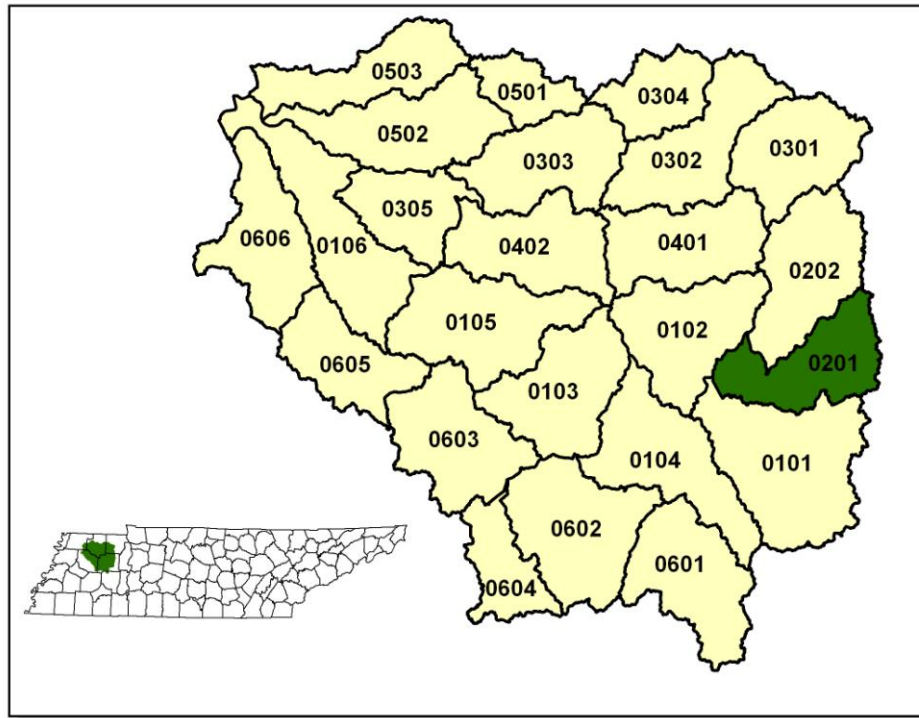
**Table 4-46. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Cotton (Row Crops)	13.8
Wheat (Close Grown Cropland)	9.88
Corn (Row Crops)	9.16
Soybeans (Row Crops)	8.28
Sorghum (Row Crops)	5.30
Other Cropland not Planted	4.61
Other Land in Farms	1.34
Grass Forbs Legumes Mixed (Pastureland)	0.92
Conservation Reserve Program Land	0.81
Legume (Pastureland)	0.68
Legume (Hayland)	0.49
Grass (Hayland)	0.36
Grass (Pastureland)	0.35
Farmsteads and Ranch Headquarters	0.33

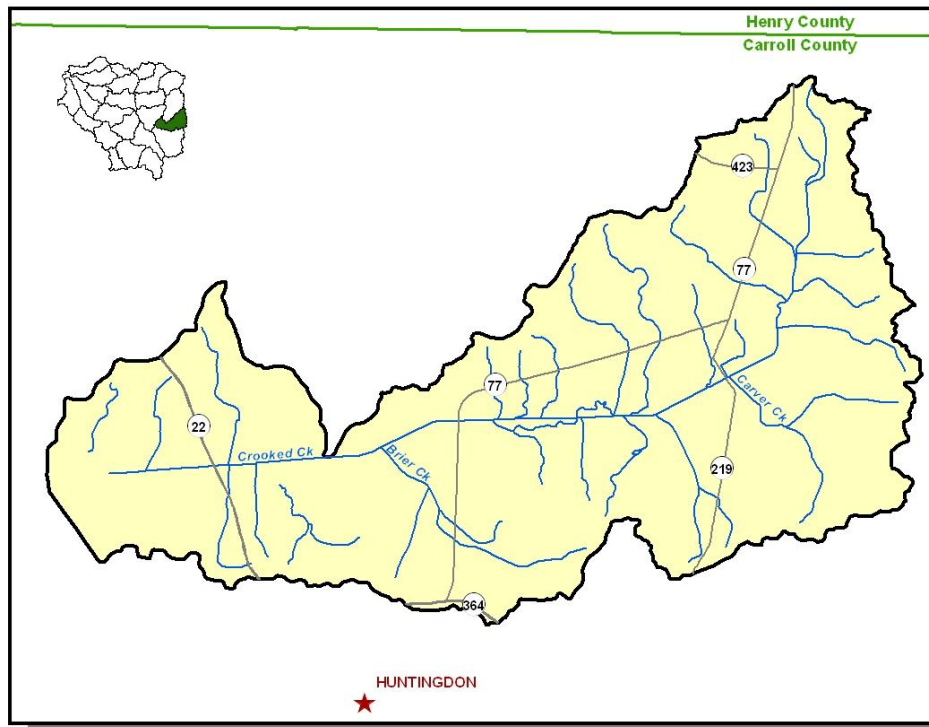
**Table 4-47. Annual Estimated Total Soil Loss in Subwatershed 080102030106.**

**4.2.G. 080102030201 (Crooked Creek).**

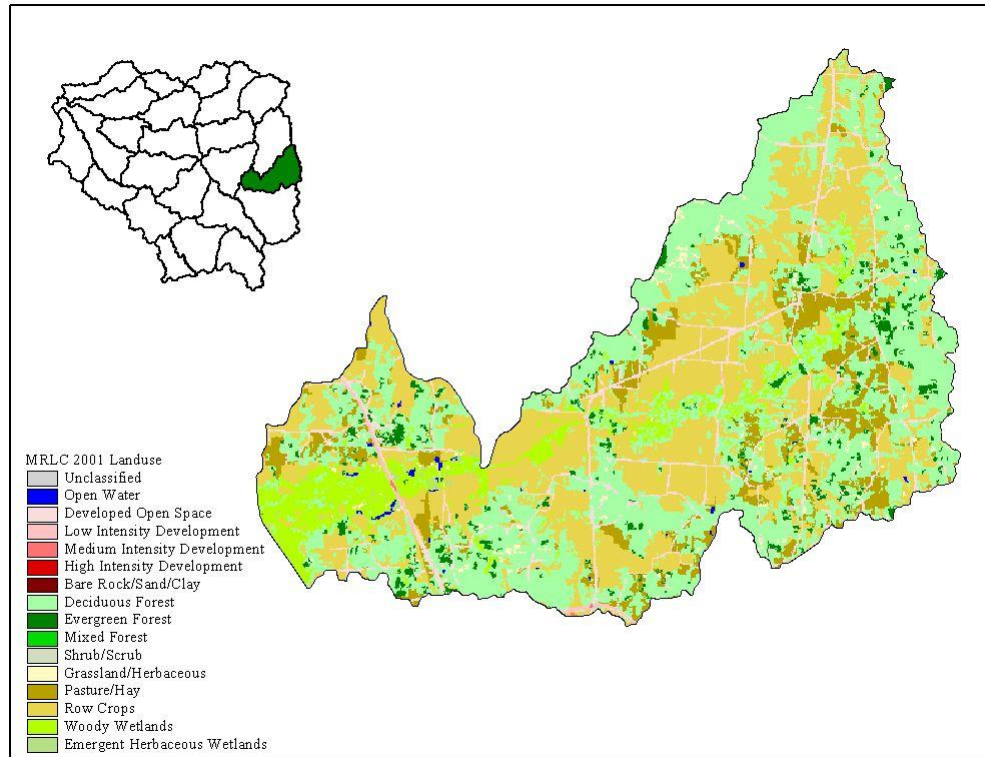
**4.2.G.i. General Description.**



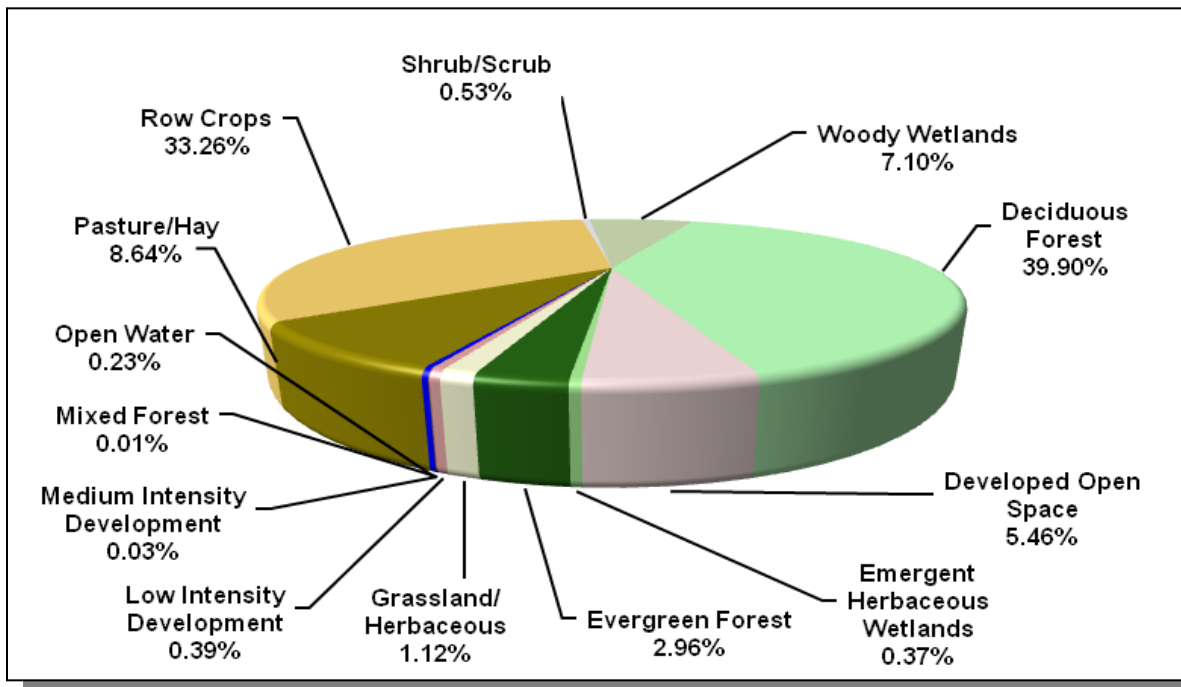
**Figure 4-65. Location of Subwatershed 080102030201.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



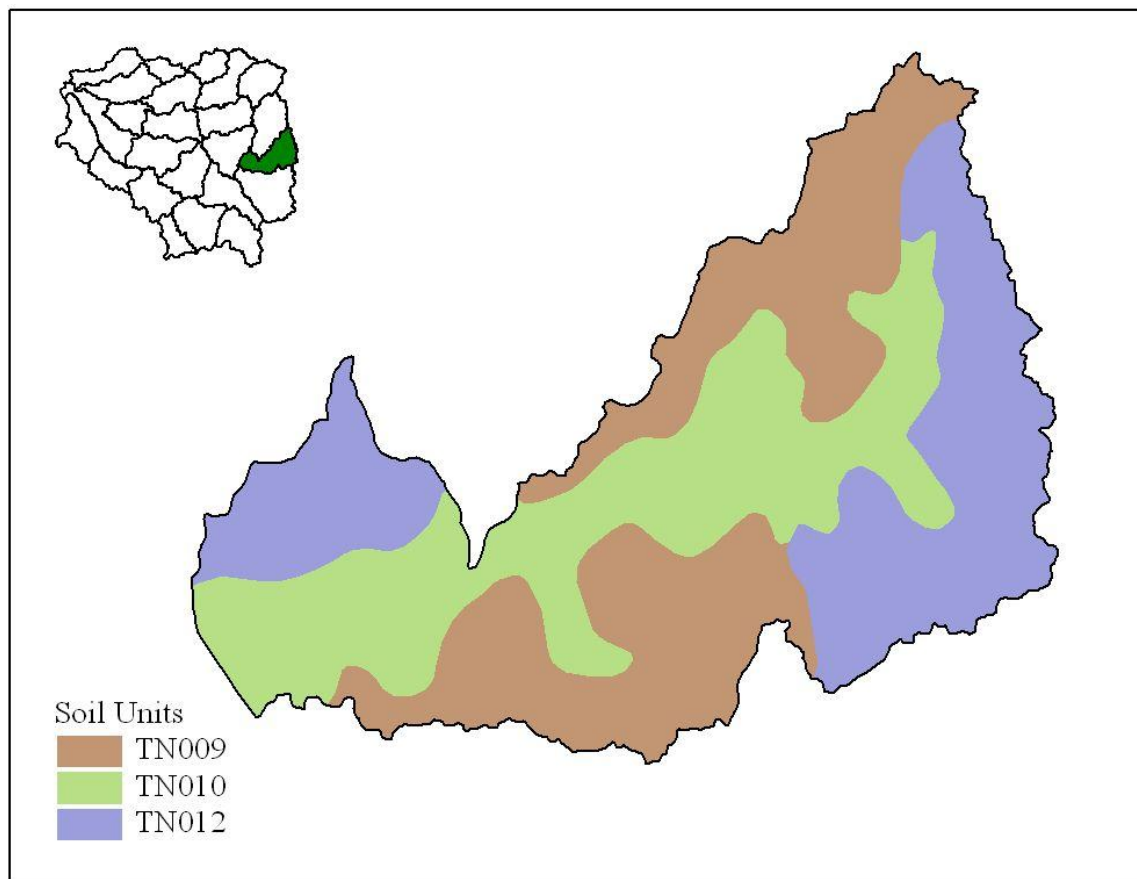
**Figure 4-66. Locational Details of Subwatershed 080102030201.**



**Figure 4-67. Illustration of Land Use Distribution in Subwatershed 080102030201.**



**Figure 4-68. Land Use Distribution in Subwatershed 080102030201.** More information is provided in Appendix IV.



**Figure 4-69. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030201.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN009	7.00	C	1.30	5.10	Silty Loam	0.43
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN012	1.00	C	2.52	5.13	Silty Loam	0.39

**Table 4-48. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030201.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Carroll	27,514	28,990	29,475	7.19	1,979	2,085	2,120	7.10

**Table 4-49. Population Estimates in Subwatershed 080102030201.**

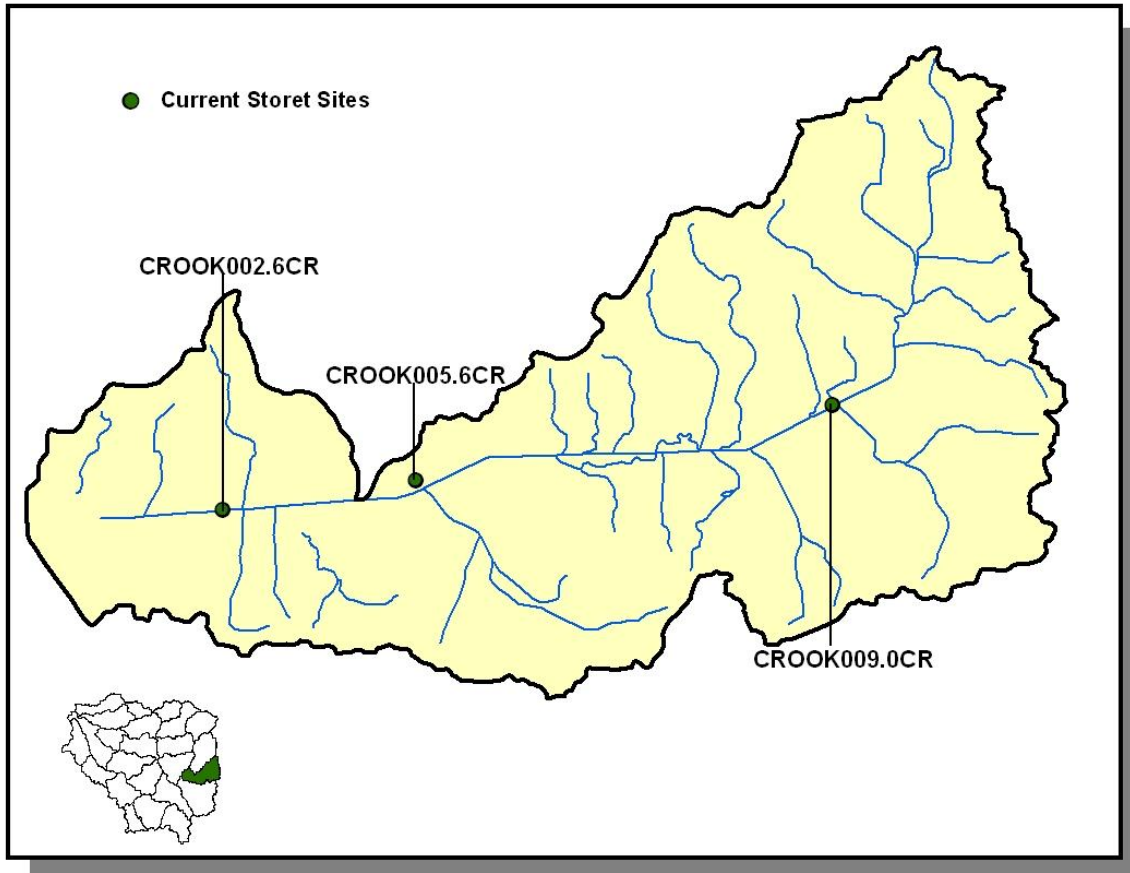
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Huntingdon	Carroll	4,180	1,790	1,566	212	12

**Table 4-50. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030201.**



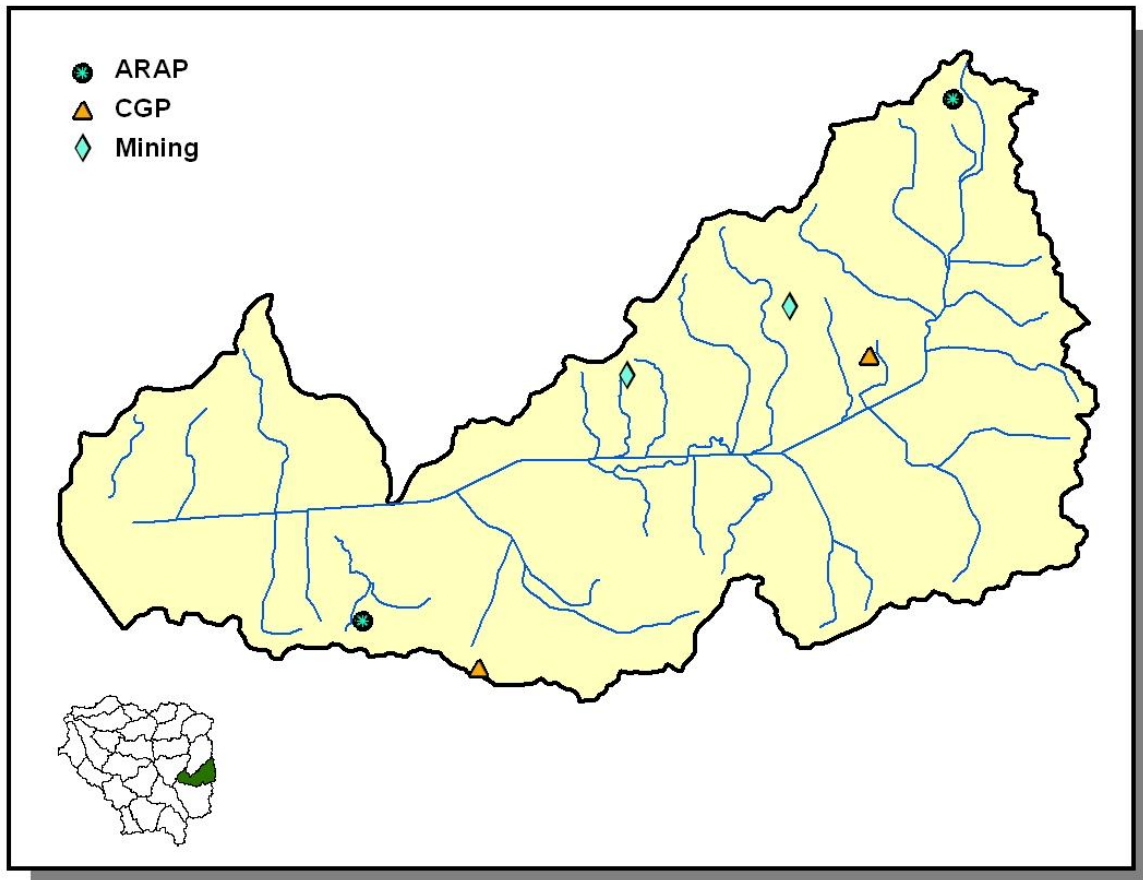
**4.2.G.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations located in subwatershed 080102030201.

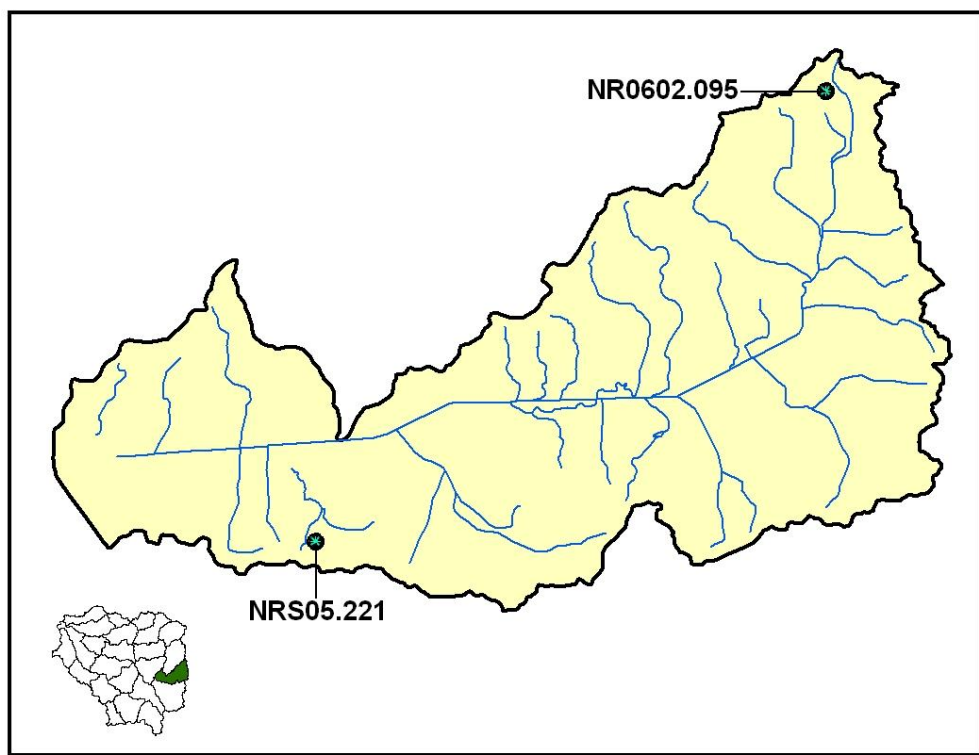


**Figure 4-70. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030201.** More information, including site names and locations, is provided in Appendix IV.

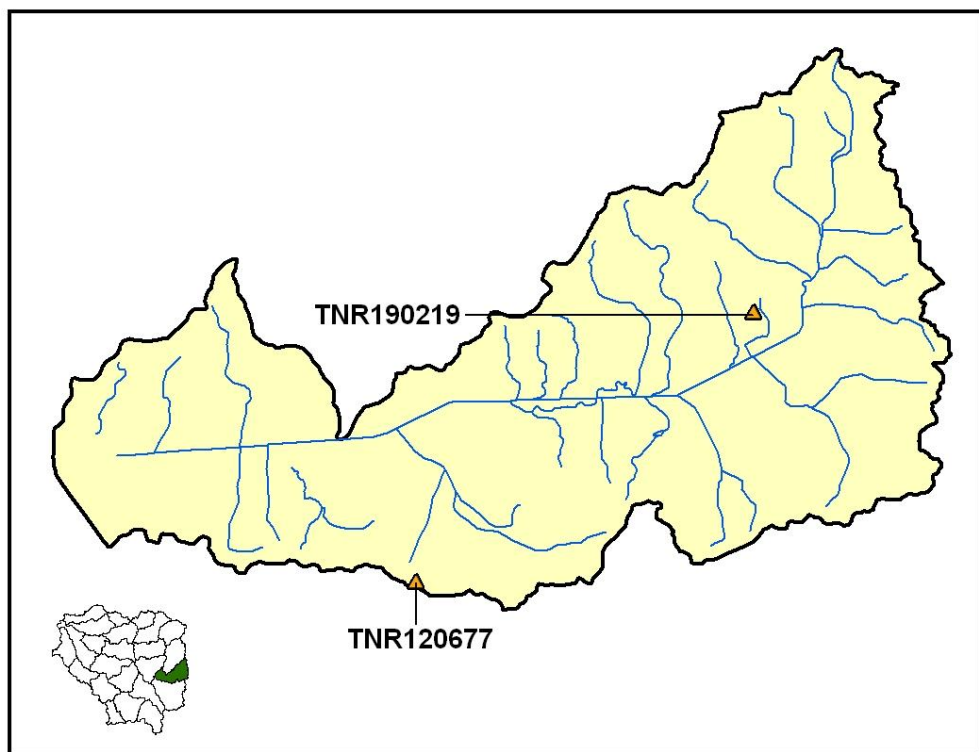
**4.2.G.iii. Permitted Activities.**



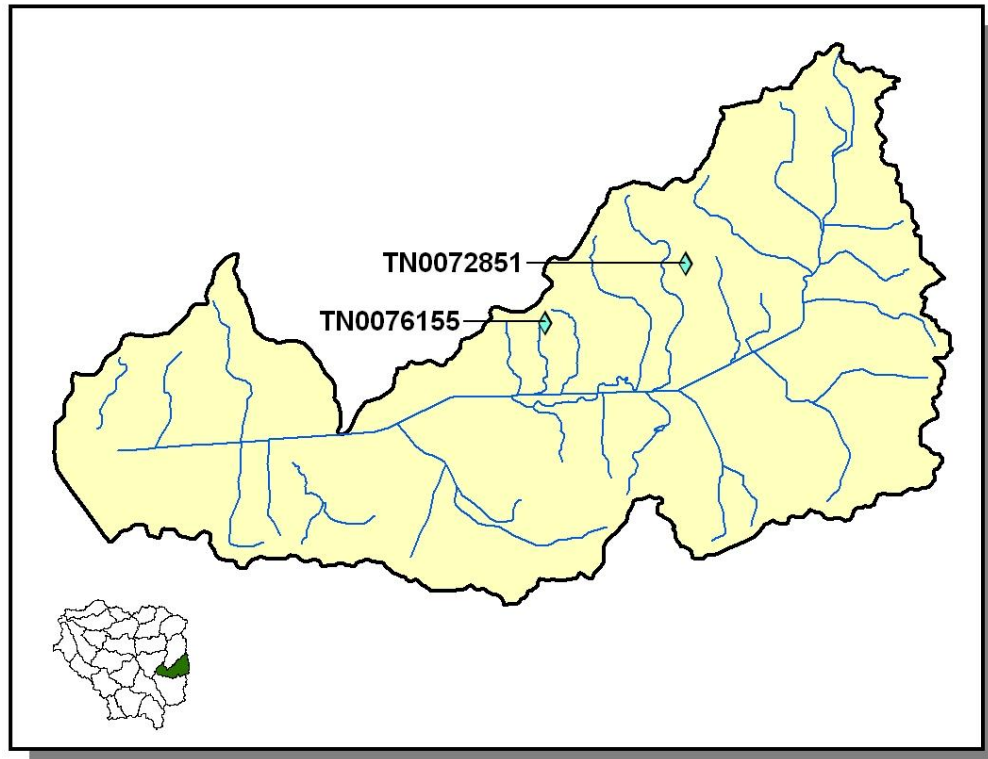
**Figure 4-71. Location of Permits Issued in Subwatershed 080102030201.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-72. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030201.** More information is provided in Appendix IV.



**Figure 4-73. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030201.** More information is provided in Appendix IV.



**Figure 4-74. Location of Permitted Mining Facilities in Subwatershed 080102030201.** More information is provided in Appendix IV.

**4.2.G.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	

**Table 4-51. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0

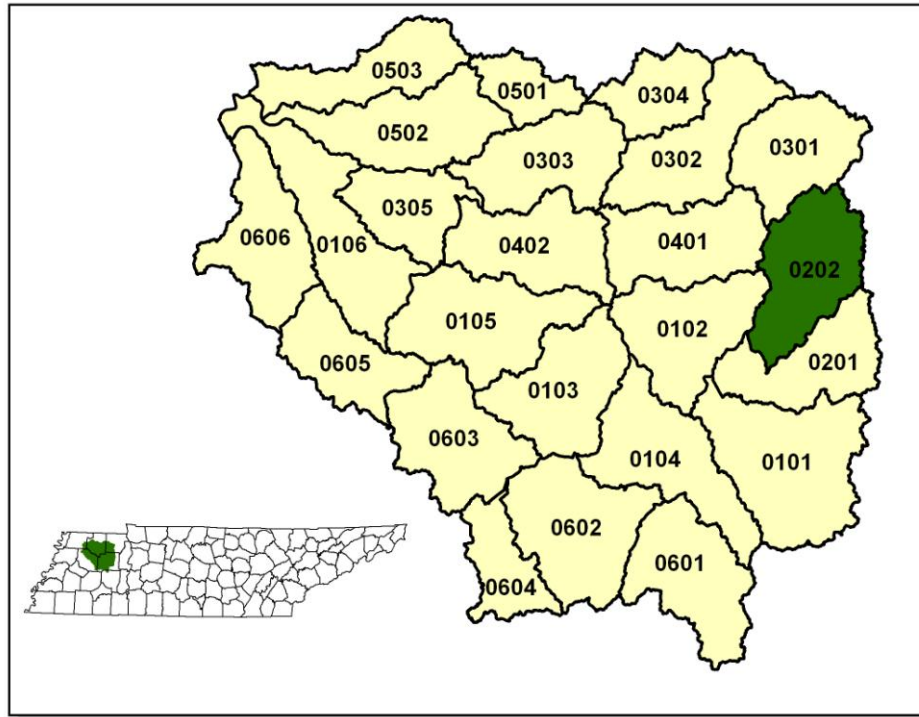
**Table 4-52. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Wheat (Close Grown Cropland)	18.5
Soybeans (Row Crops)	10.2
Other Cropland not Planted	9.50
Cotton (Row Crops)	7.58
Corn (Row Crops)	5.95
Conservation Reserve Program Land	1.23
Farmsteads and Ranch Headquarters	1.12
Other Land in Farms	0.59
Grass Forbs Legumes Mixed (Pastureland)	0.58
Legume Grass (Hayland)	0.46
Grass (Pastureland)	0.40
Grass (Hayland)	0.21
Legume (Hayland)	0.07

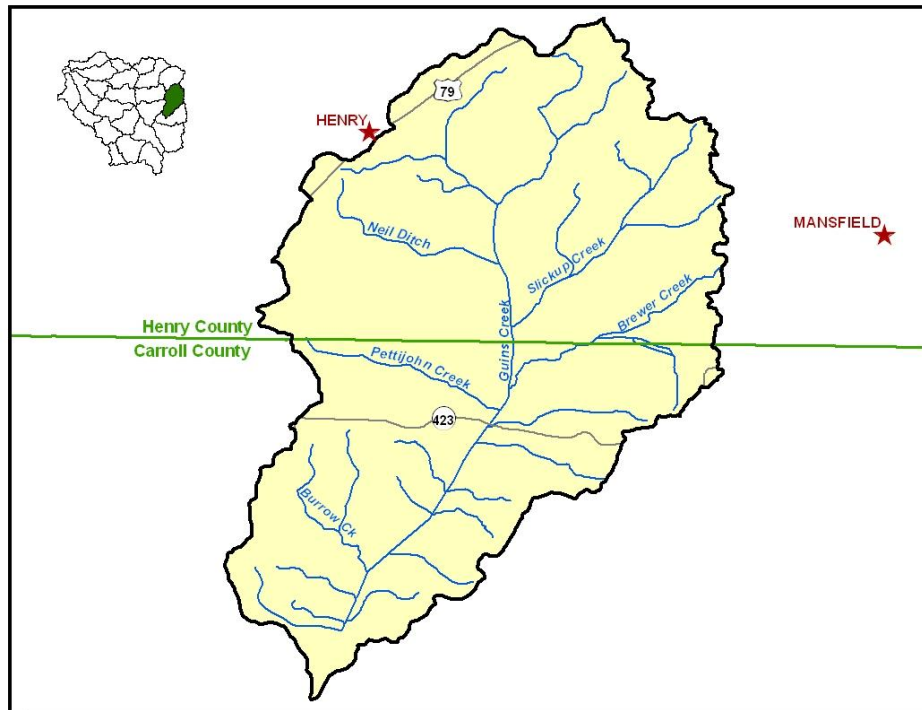
**Table 4-53. Annual Estimated Total Soil Loss in Subwatershed 080102030201.**

**4.2.H. 080102030202 (Guins Creek).**

**4.2.H.i. General Description.**

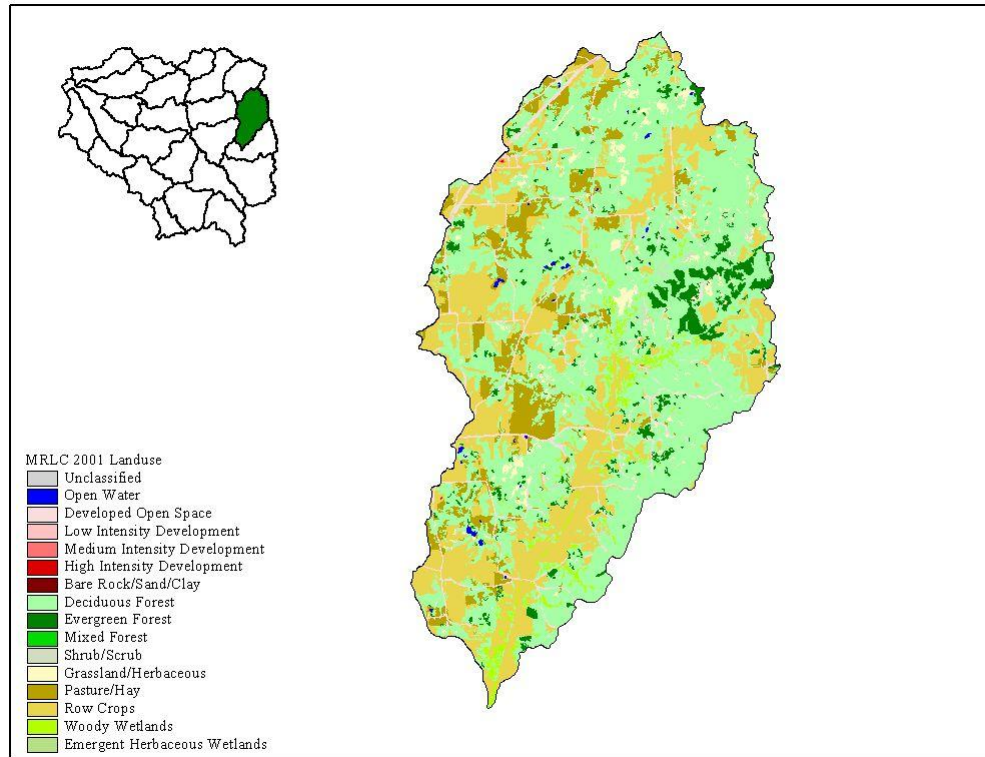


**Figure 4-75. Location of Subwatershed 080102030202.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.

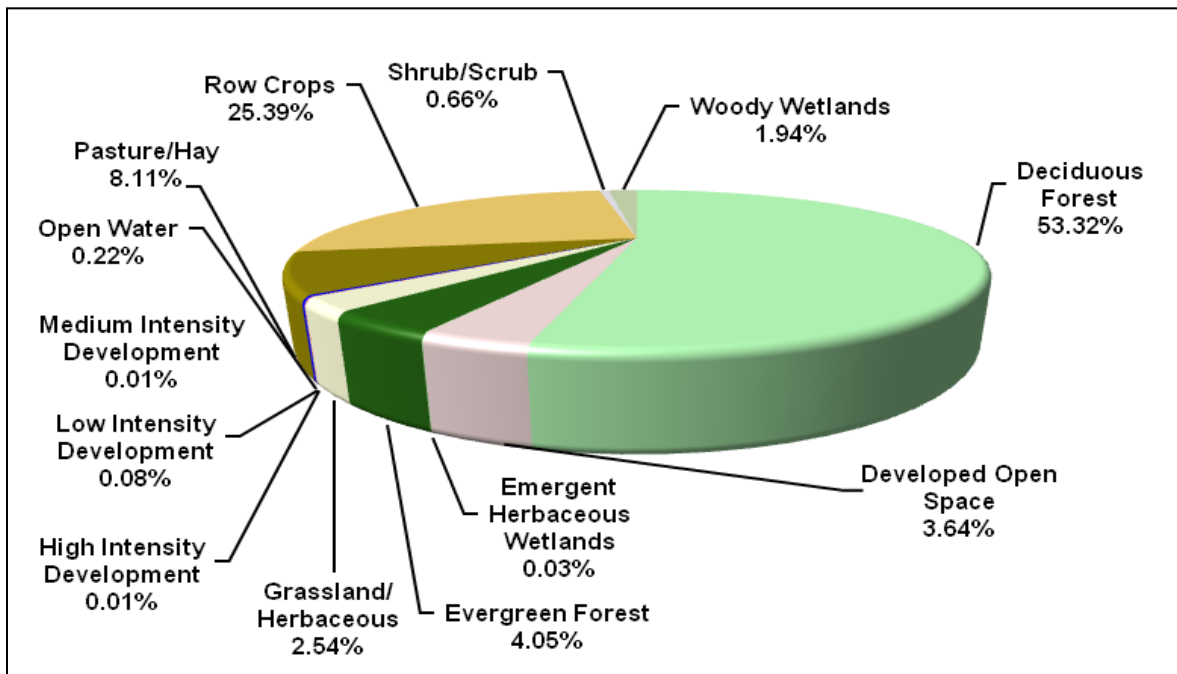


**Figure 4-76. Locational Details of Subwatershed 080102030202.**

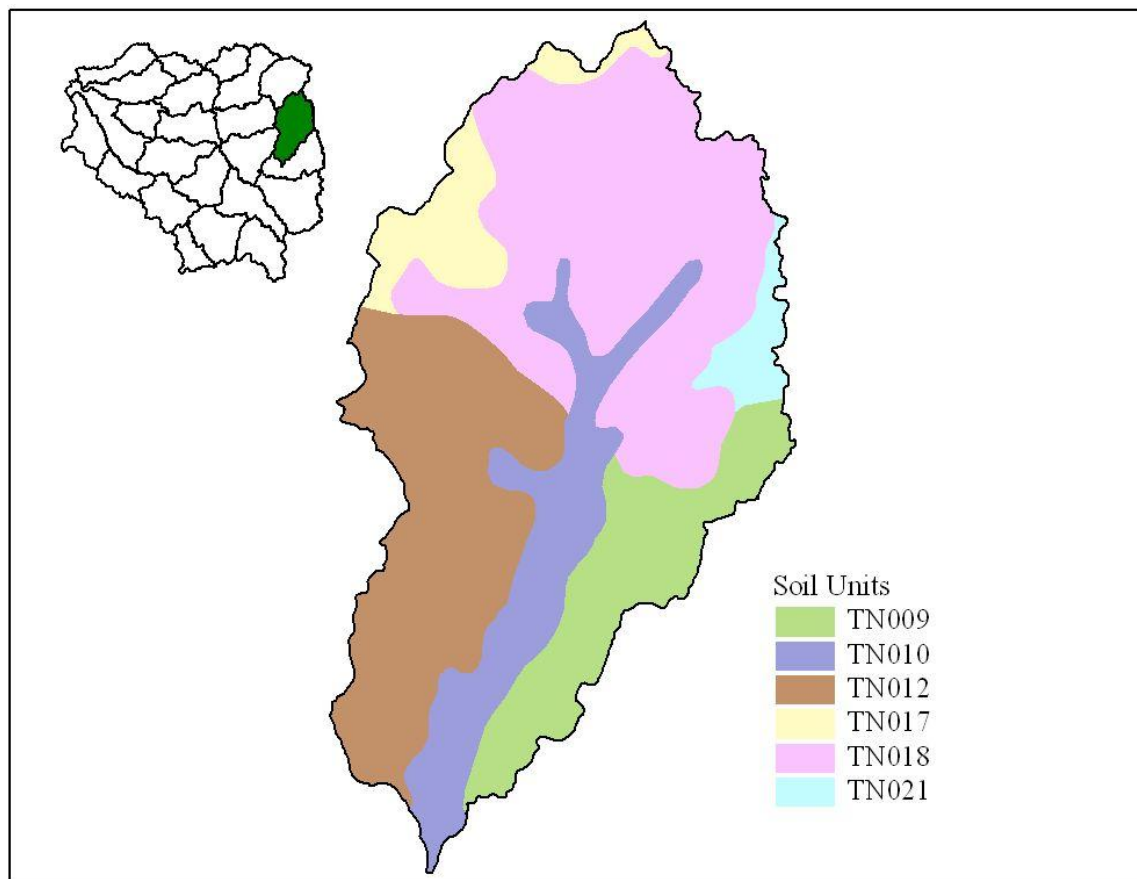




**Figure 4-77. Illustration of Land Use Distribution in Subwatershed 080102030202.**



**Figure 4-78. Land Use Distribution in Subwatershed 080102030202.** More information is provided in Appendix IV.



**Figure 4-79. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030202.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN009	7.00	C	1.30	5.10	Silty Loam	0.43
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN012	1.00	C	2.52	5.13	Silty Loam	0.39
TN017	0.00	B	1.81	5.26	Silty Loam	0.45
TN018	4.00	B	2.62	5.10	Loam	0.38
TN021	5.00	C	1.30	5.00	Silty Loam	0.43

**Table 4-54. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030202.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Carroll	27,514	28,990	29,475	4.22	1,162	1,224	1,245	7.10
Henry	27,888	29,830	31,115	4.45	1,241	1,328	1,385	11.60
<b>Total</b>	<b>55,402</b>	<b>58,820</b>	<b>60,590</b>		<b>2,403</b>	<b>2,552</b>	<b>2,630</b>	<b>9.40</b>

*Table 4-55. Population Estimates in Subwatershed 080102030202.*

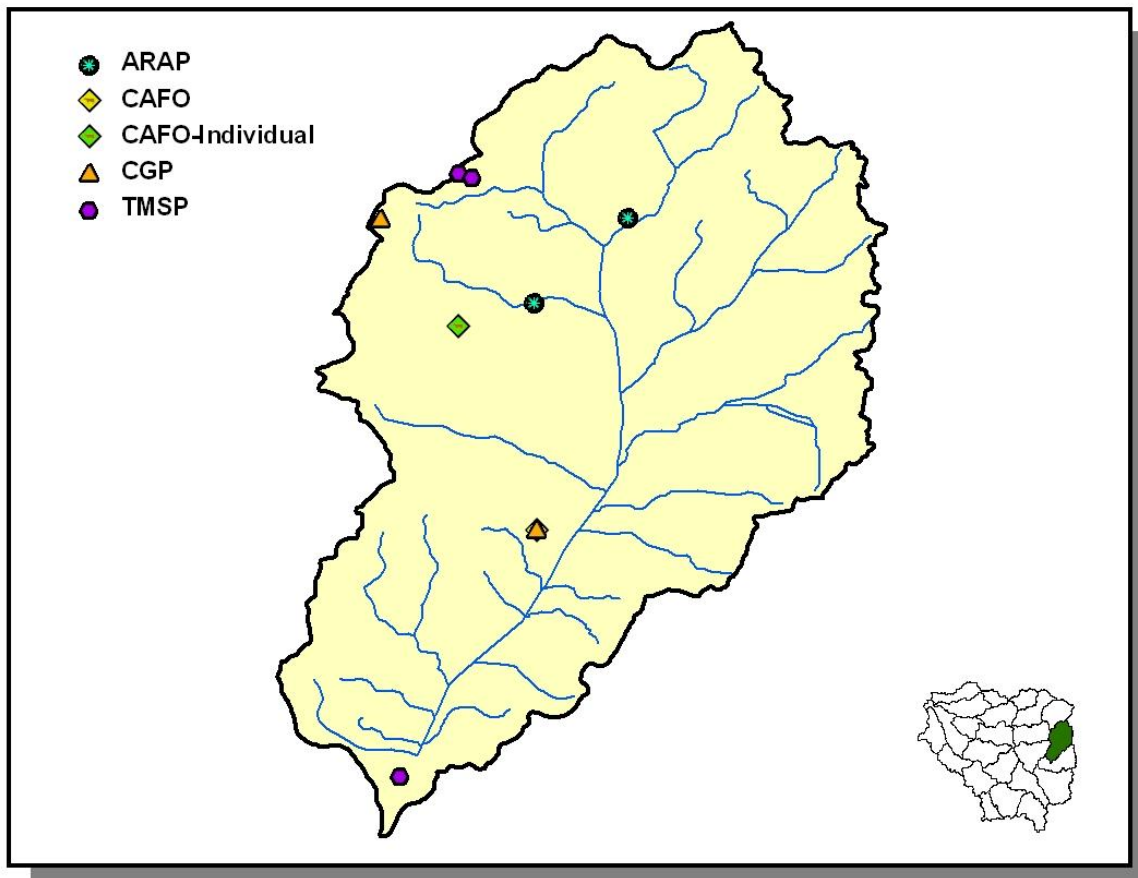
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Henry	Henry	311	143	0	138	5

*Table 4-56. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030202.*

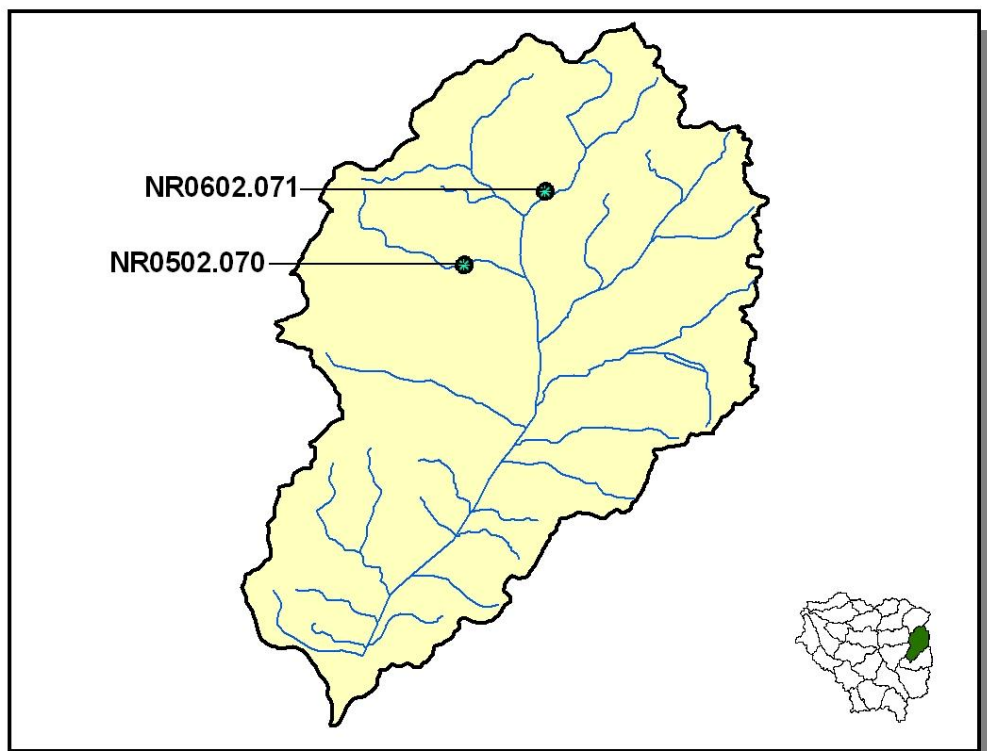
#### **4.2.H.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations or STORET sites located in subwatershed 080102030202.

#### **4.2.H.iii. Permitted Activities.**



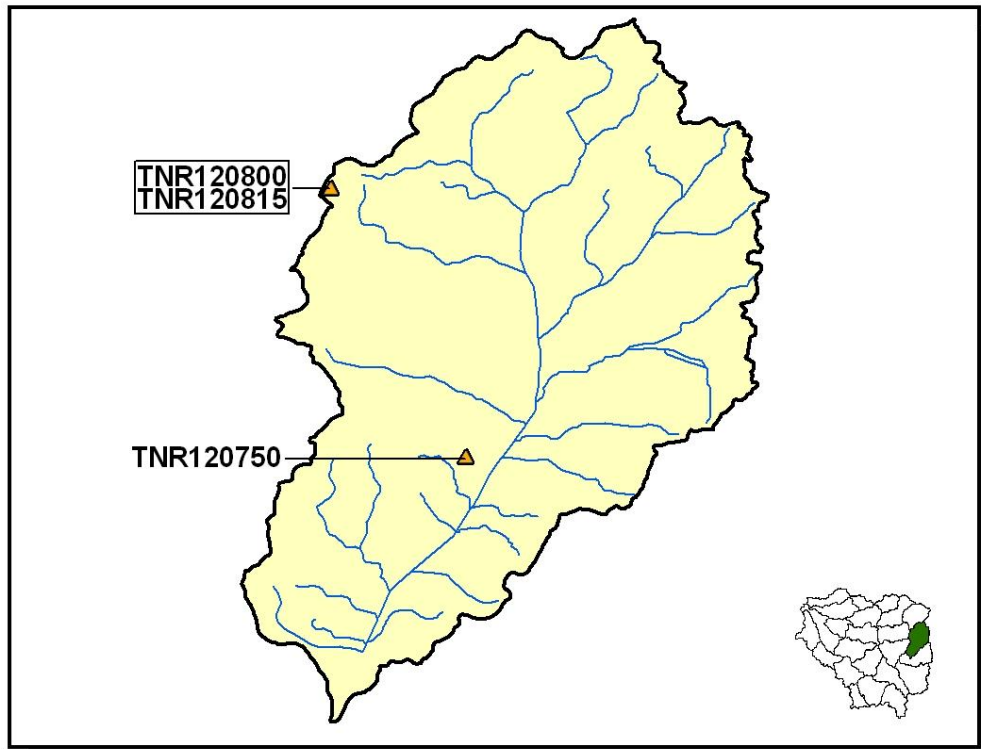
**Figure 4-80. Location of Permits Issued in Subwatershed 080102030202.** More information, including the names of facilities, is provided in Appendix IV.



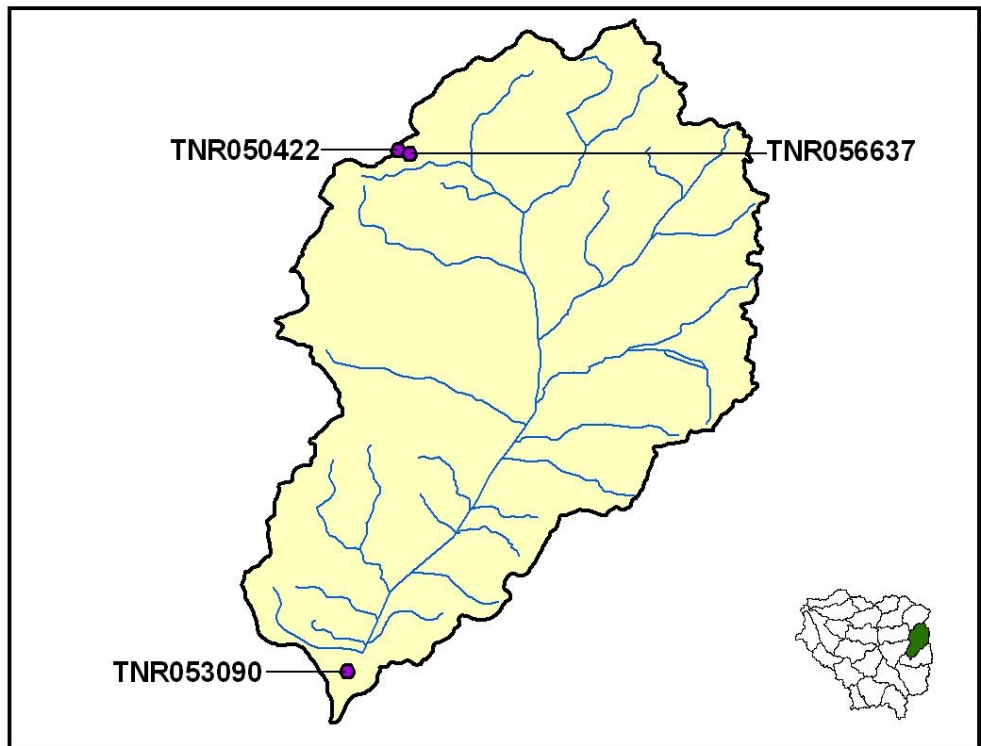
**Figure 4-81. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030202.** More information is provided in Appendix IV.



**Figure 4-82. Location of CAFO (Concentrated Animal Feed Operation) Permit Sites in Subwatershed 080102030202.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-83. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030202.** More information is provided in Appendix IV.



**Figure 4-84. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030202.** More information is provided in Appendix IV.



**4.2.H.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	
Henry	8,920	20,299	1,793	29	36,205	89

**Table 4-57. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0
Henry	176.1	176.1	1.9	7.1

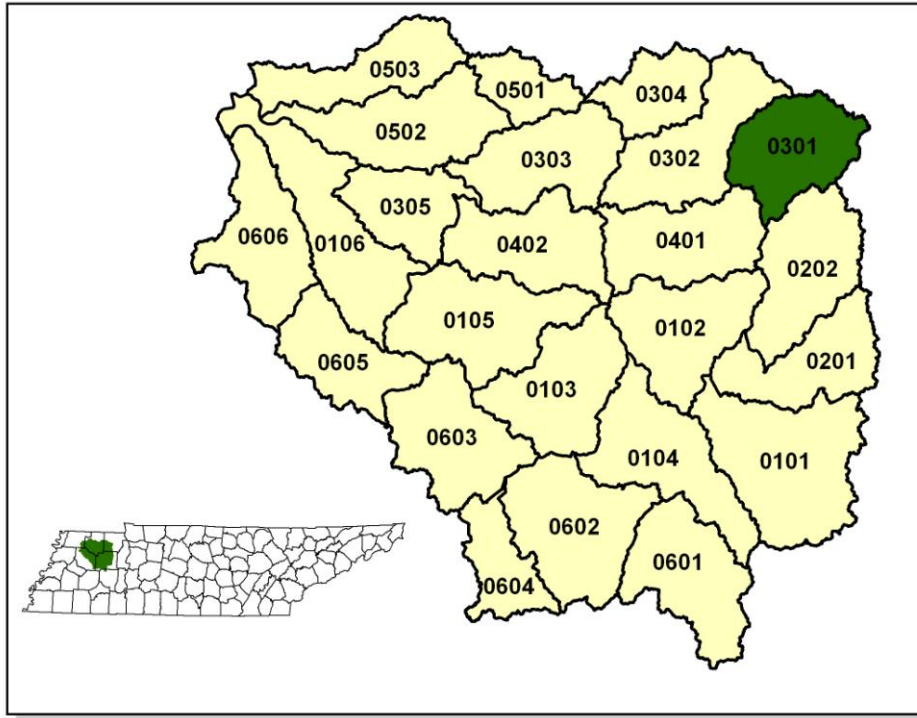
**Table 4-58. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Other (Horticultural)	16.41
Wheat (Close Grown Cropland)	12.14
Soybeans (Row Crops)	8.25
Cotton (Row Crops)	7.58
Corn (Row Crops)	6.85
Other Cropland not Planted	5.98
Conservation Reserve Program Land	0.89
Farmsteads and Ranch Headquarters	0.60
Other Land in Farms	0.59
Grass Forbs Legumes Mixed (Pastureland)	0.55
Grass (Pastureland)	0.32
Legume Grass (Hayland)	0.28
Grass (Hayland)	0.23
Legume (Hayland)	0.07

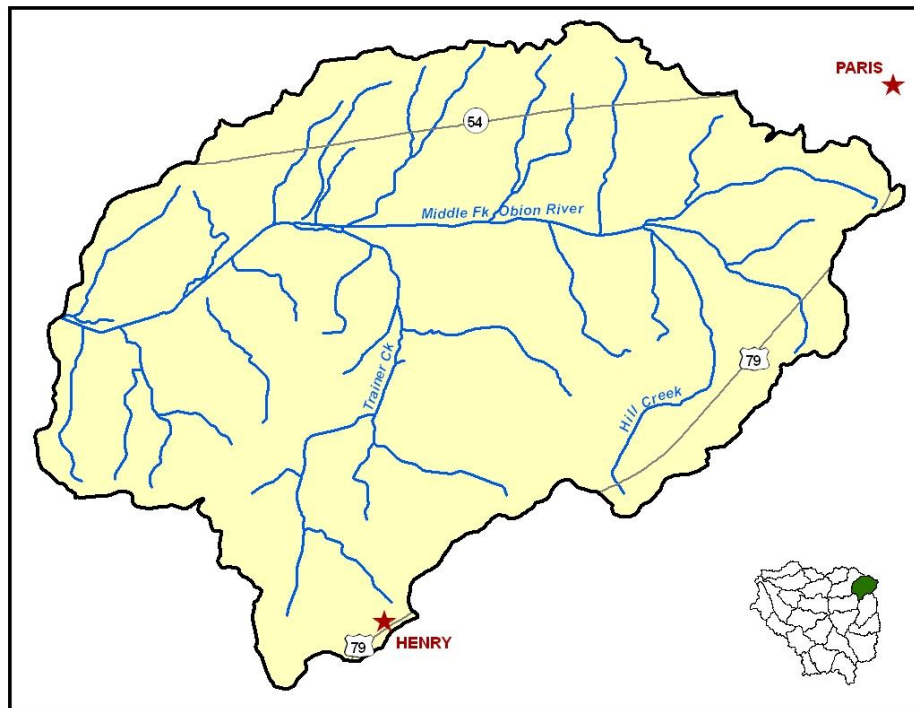
**Table 4-59. Annual Estimated Total Soil Loss in Subwatershed 080102030202.**

#### 4.2.I. 080102030301 (Middle Fork Obion River).

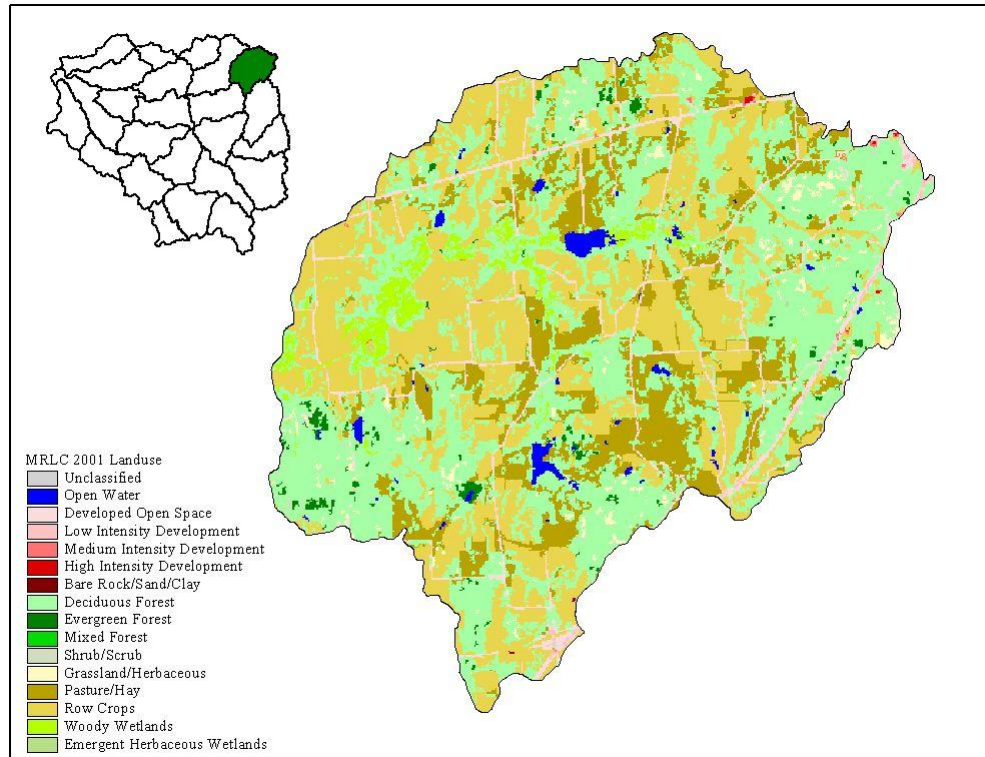
##### 4.2.I.i. General Description.



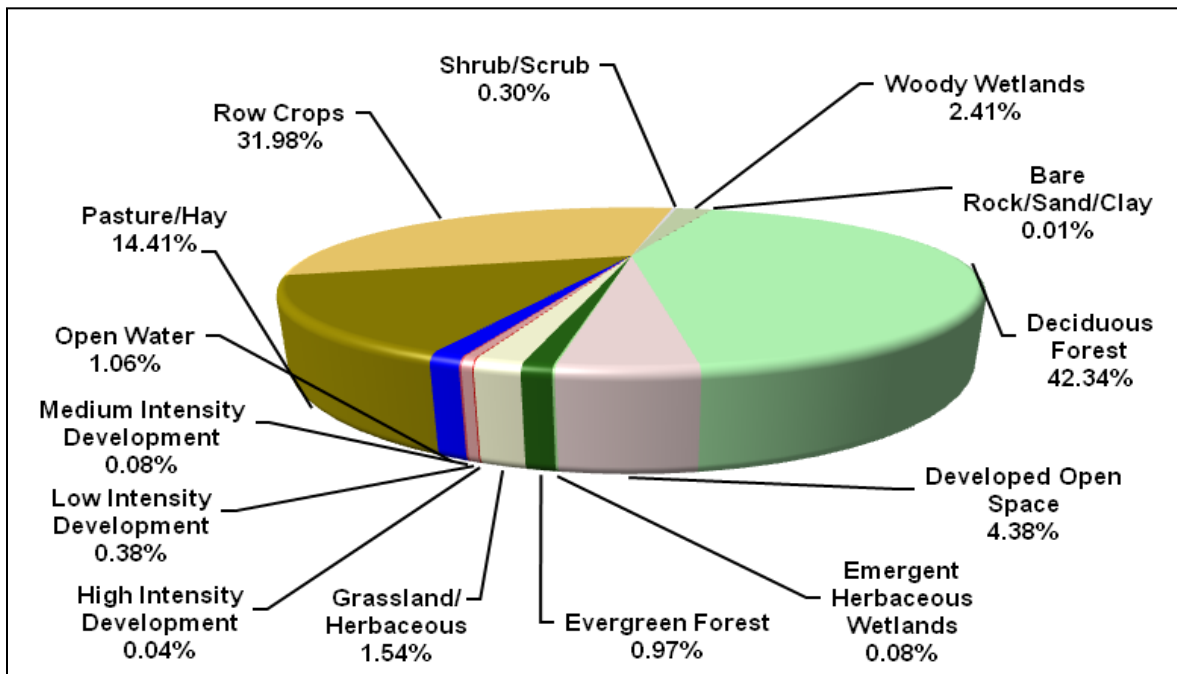
**Figure 4-85. Location of Subwatershed 080102030301.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



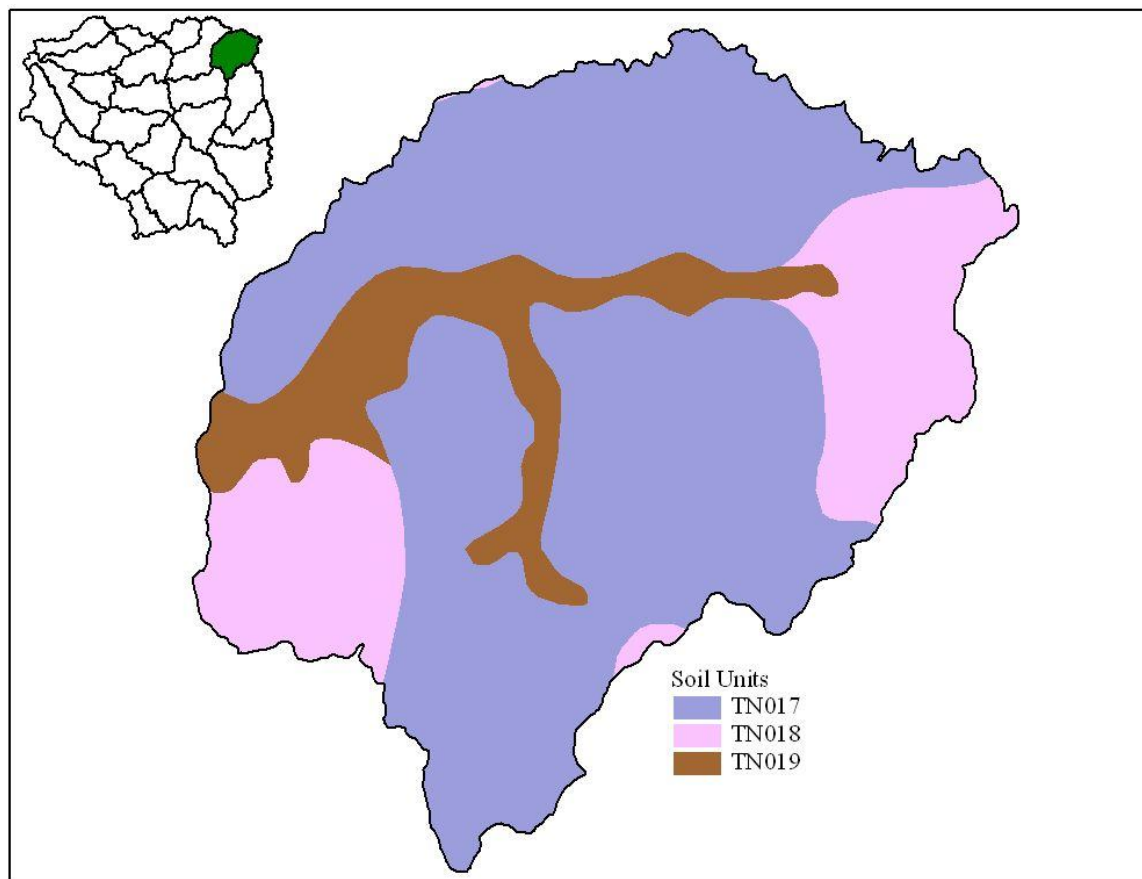
**Figure 4-86. Locational Details of Subwatershed 080102030301.**



**Figure 4-87. Illustration of Land Use Distribution in Subwatershed 080102030301.**



**Figure 4-88. Land Use Distribution in Subwatershed 080102030301.** More information is provided in Appendix IV.



**Figure 4-89. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030301.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN017	0.00	B	1.81	5.26	Silty Loam	0.45
TN018	4.00	B	2.62	5.10	Loam	0.38
TN019	62.00	C	1.54	4.76	Loam	0.26

**Table 4-60. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030301.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Henry	2,7888	29,830	31,115	7.51	2,094	2,240	2,337	11.60

**Table 4-61. Population Estimates in Subwatershed 080102030301.**

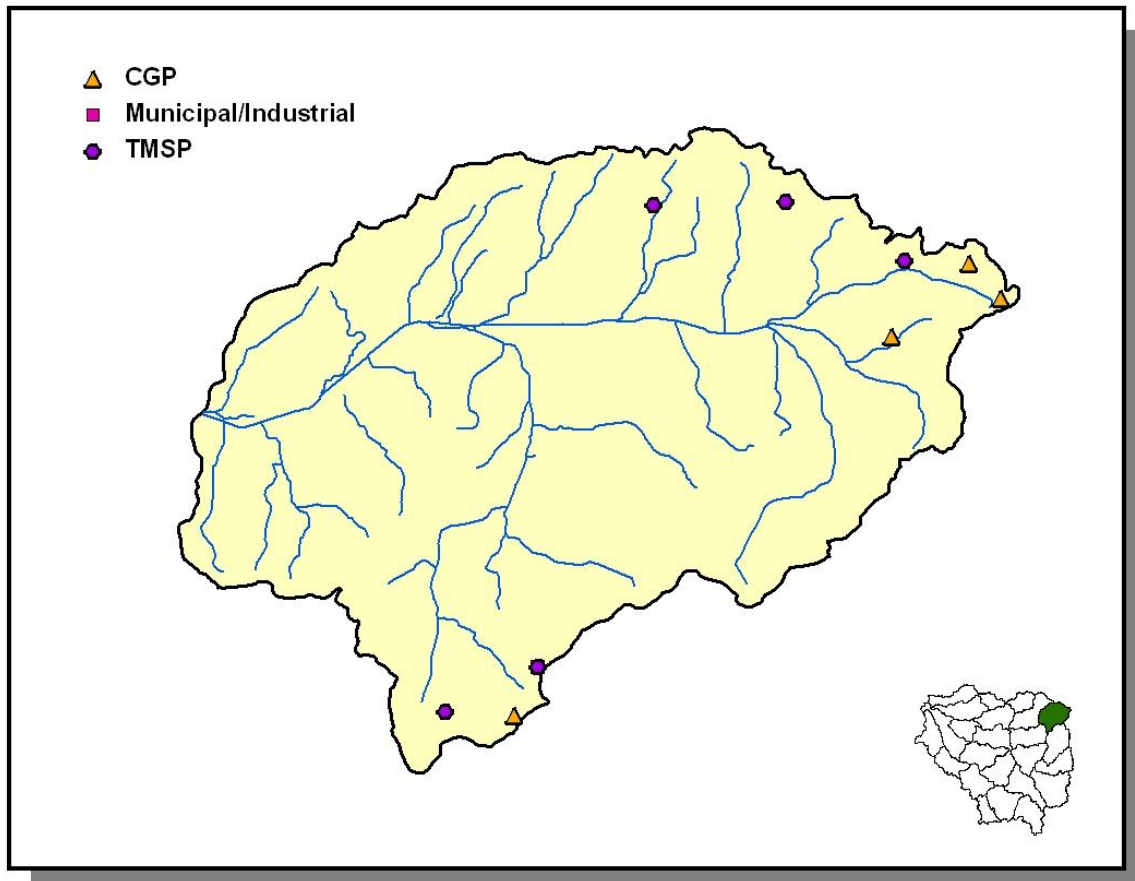
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Henry	Henry	311	143	0	138	5
Paris	Henry	9,332	4,538	4,382	151	5
<b>Total</b>		<b>9,643</b>	<b>4,681</b>	<b>4,382</b>	<b>289</b>	<b>10</b>

**Table 4-62. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030301.**

#### 4.2.I.ii. USGS Gaging Stations and STORET Sites.

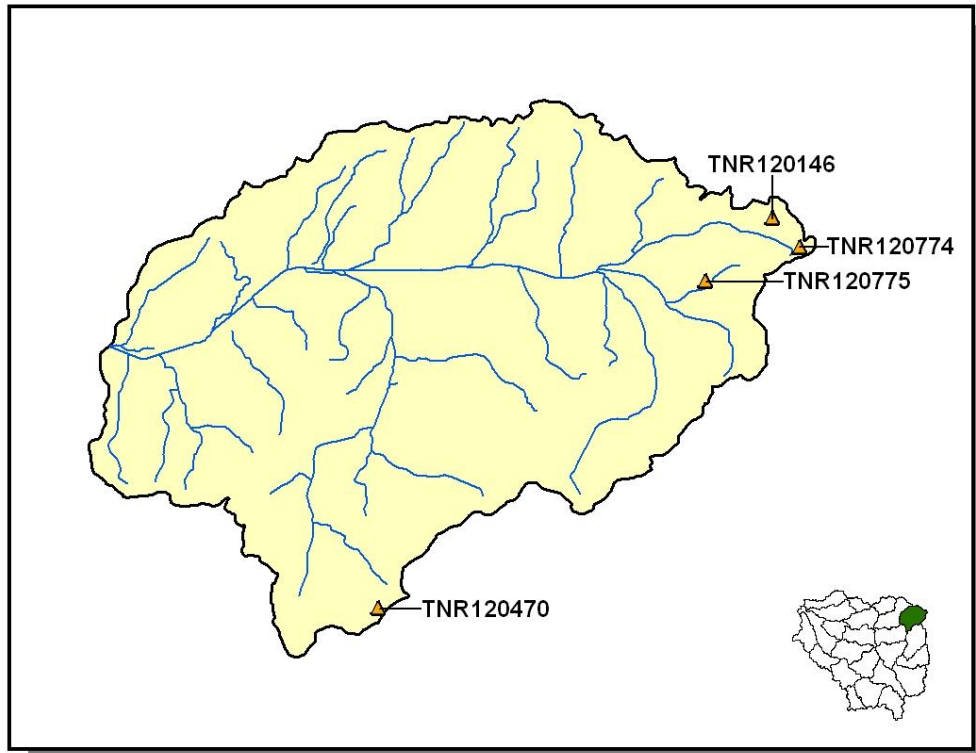
There are no USGS continuous record gaging stations or STORET sites located in subwatershed 080102030301.

#### 4.2.I.iii. Permitted Activities.

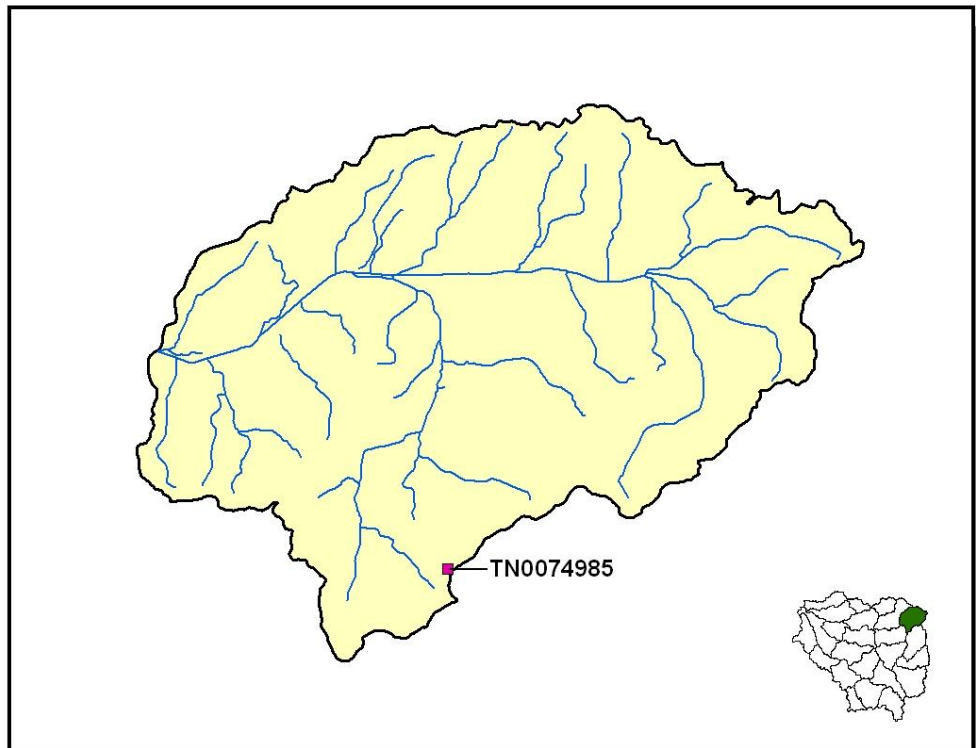


**Figure 4-90. Location of Permits Issued in Subwatershed 080102030301.** More information, including the names of facilities, is provided in Appendix IV.

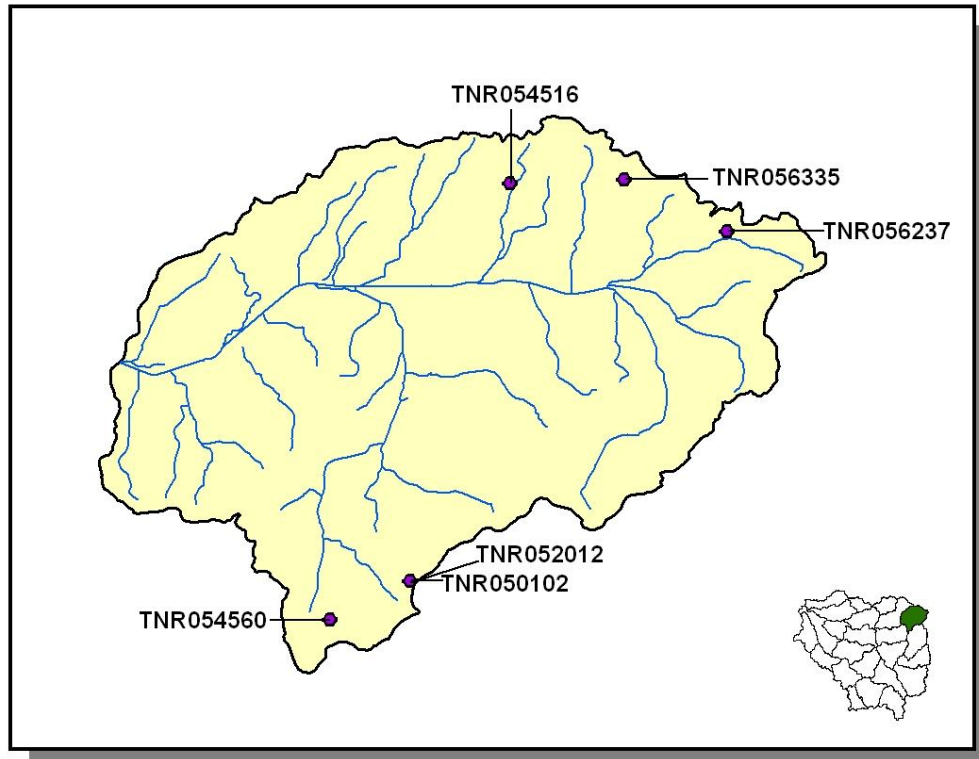




**Figure 4-91. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030301.** More information is provided in Appendix IV.



**Figure 4-92. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030301.** More information, including the name of the facility is provided in Appendix IV.



**Figure 4-93. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030301.** More information is provided in Appendix IV.

**4.2.I.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Henry	8,920	20,299	1,793	29	36,205	89

**Table 4-63. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Henry	176.1	176.1	1.9	7.1

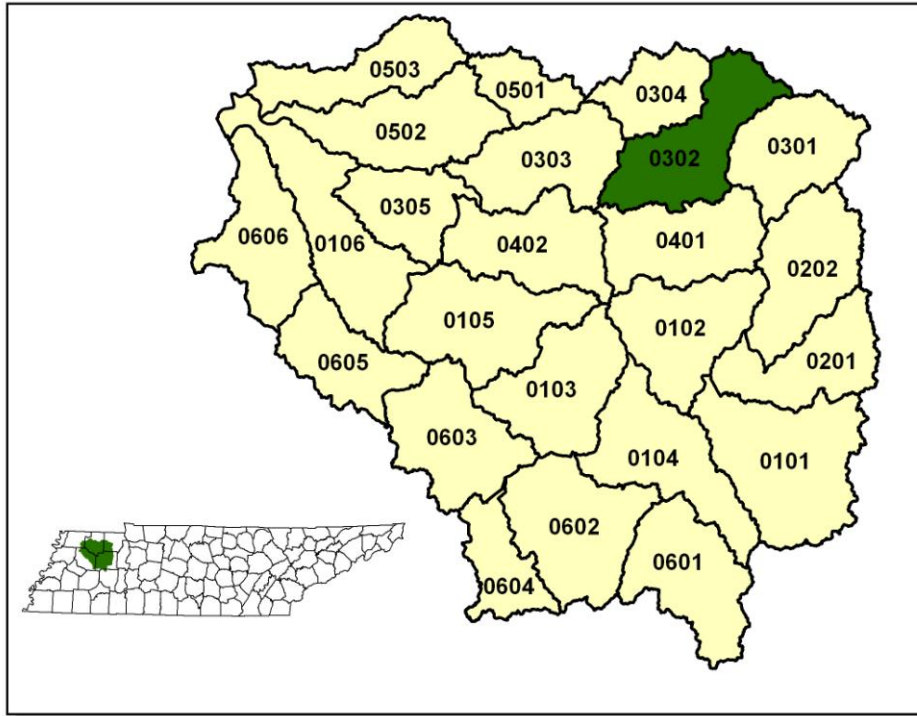
**Table 4-64. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Other (Horticultural)	16.41
Corn (Row Crops)	7.72
Soybeans (Row Crops)	6.38
Wheat (Close Grown Cropland)	6.02
Other Cropland not Planted	2.61
Conservation Reserve Program Land	0.57
Grass Forbs Legumes Mixed (Pastureland)	0.52
Grass (Pastureland)	0.25
Grass (Hayland)	0.25
Legume Grass (Hayland)	0.11
Farmsteads and Ranch Headquarters	0.10

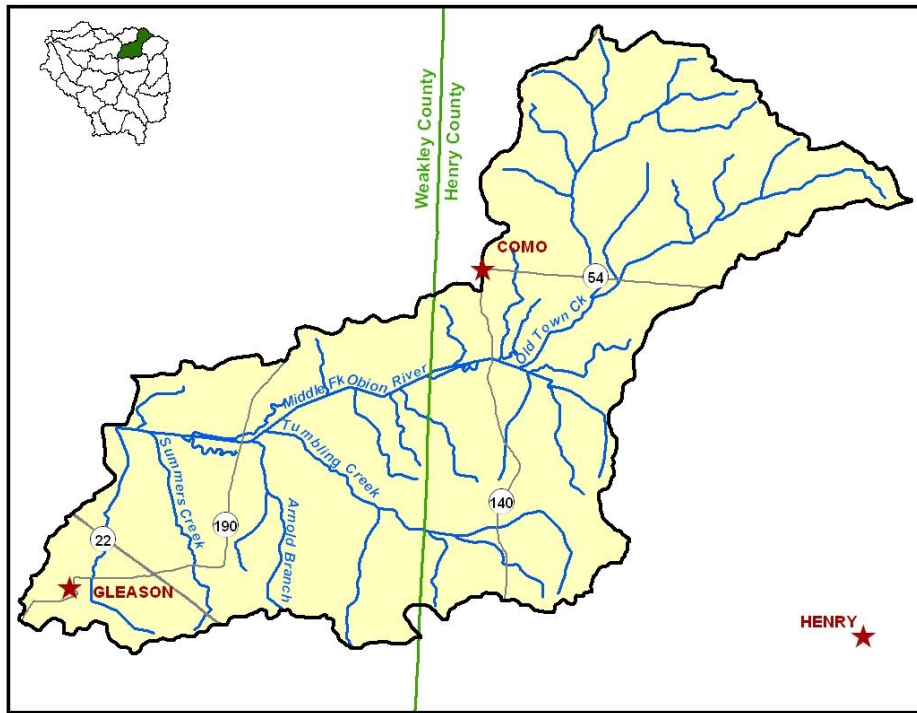
**Table 4-65. Annual Estimated Total Soil Loss in Subwatershed 080102030301.**

#### 4.2.J. 080102030302 (Middle Fork Obion River).

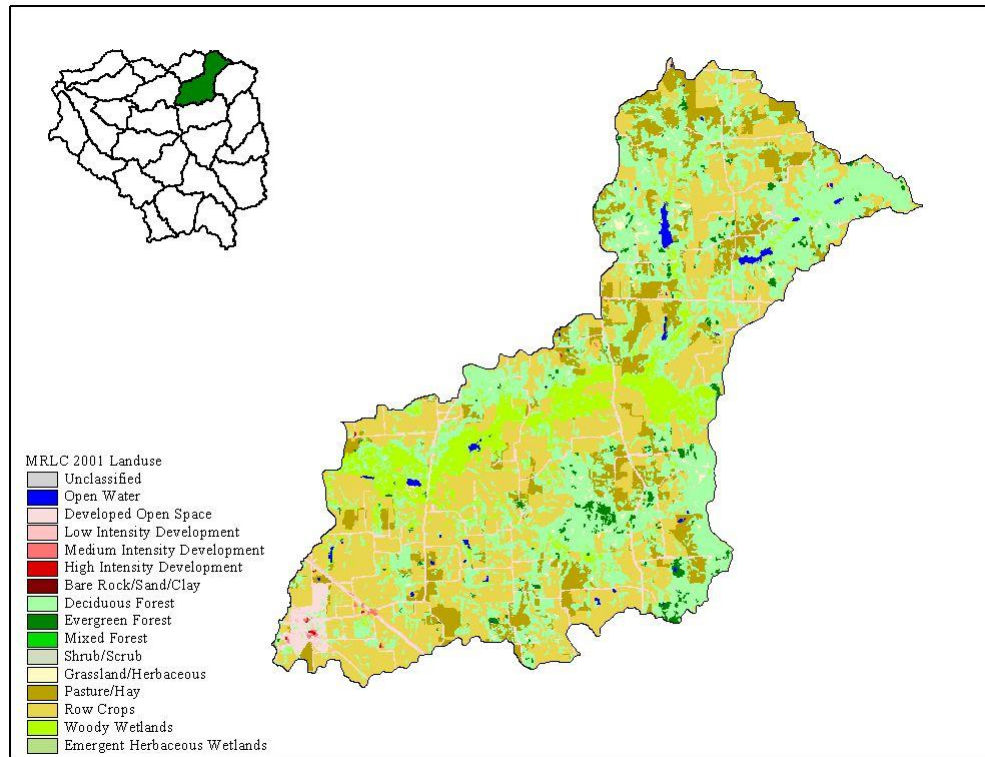
##### 4.2.J.i. General Description.



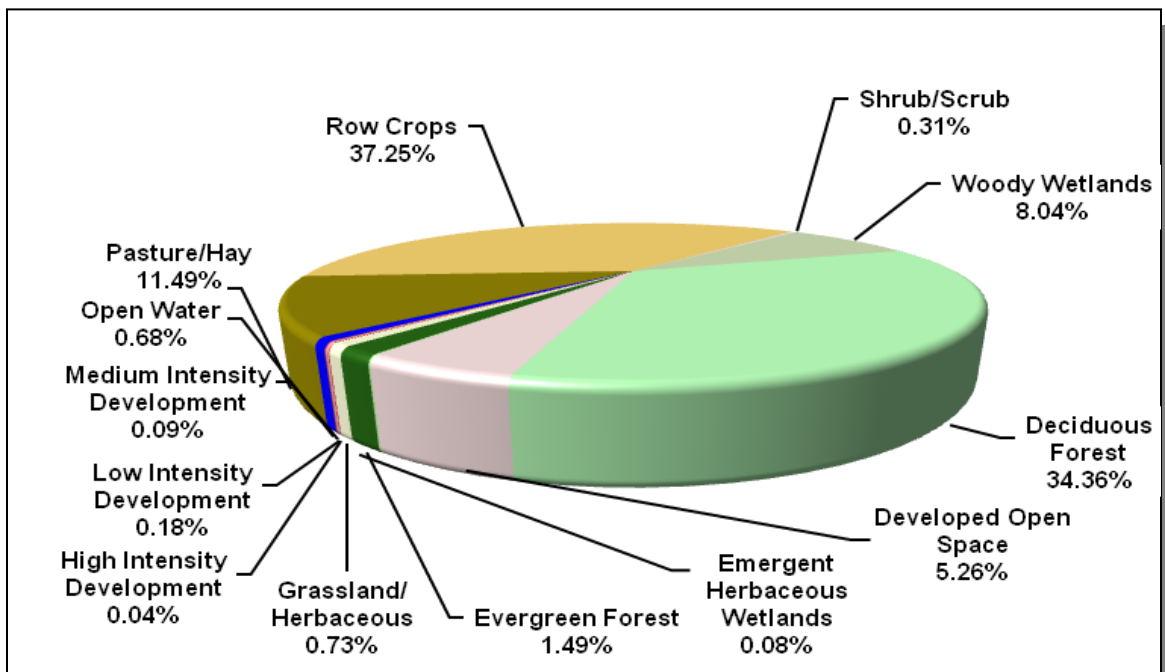
**Figure 4-94. Location of Subwatershed 080102030302.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



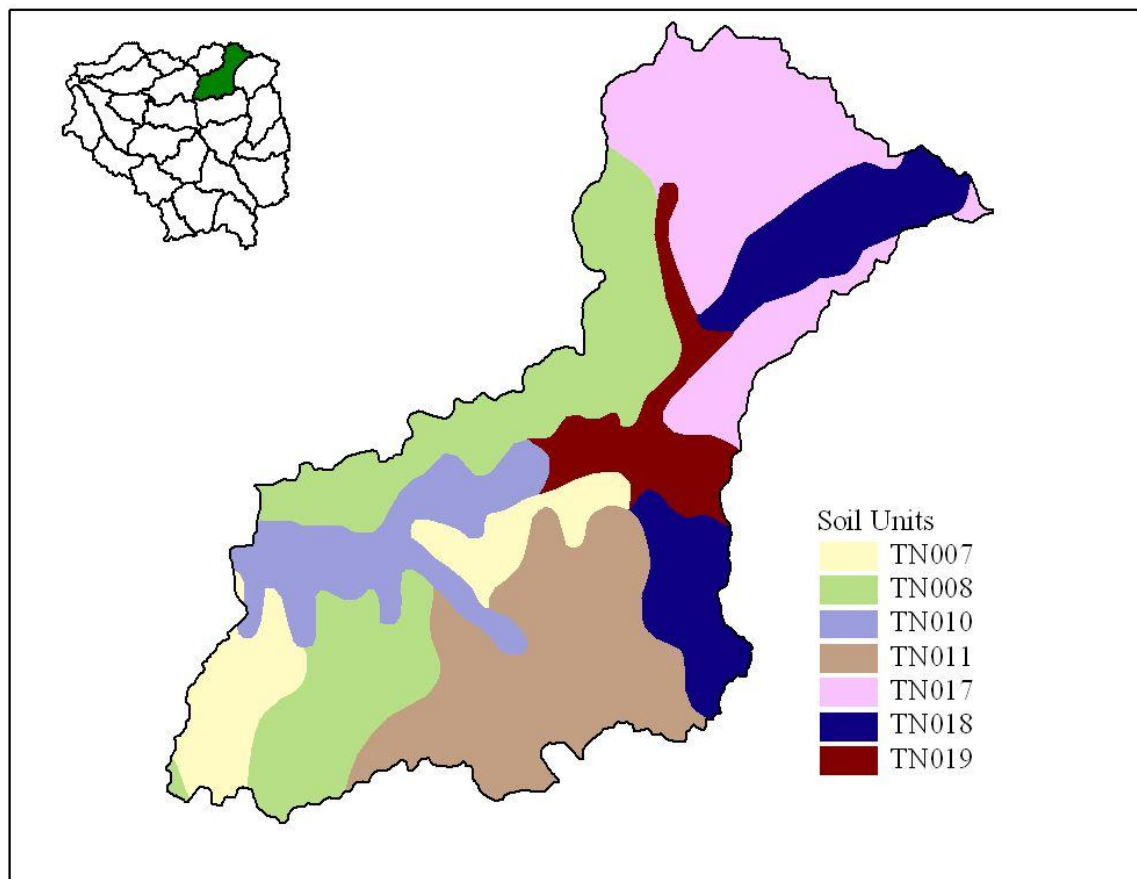
**Figure 4-95. Locational Details of Subwatershed 080102030302.**



**Figure 4-96. Illustration of Land Use Distribution in Subwatershed 080102030302.**



**Figure 4-97. Land Use Distribution in Subwatershed 080102030302.** More information is provided in Appendix IV.



**Figure 4-98. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030302.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40
TN017	0.00	B	1.81	5.26	Silty Loam	0.45
TN018	4.00	B	2.62	5.10	Loam	0.38
TN019	62.00	C	1.54	4.76	Loam	0.26

**Table 4-66. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030302.** The definition of "Hydrologic Group" is provided in Appendix IV.



County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Henry	27,888	29,830	31115	5.02	1,399	1,497	1,561	11.60
Weakley	31,972	32,808	34895	4.04	1,292	1,326	1,410	9.10
<b>Total</b>	<b>59,860</b>	<b>62,638</b>	<b>66010</b>		<b>2,691</b>	<b>2,823</b>	<b>2,971</b>	<b>10.40</b>

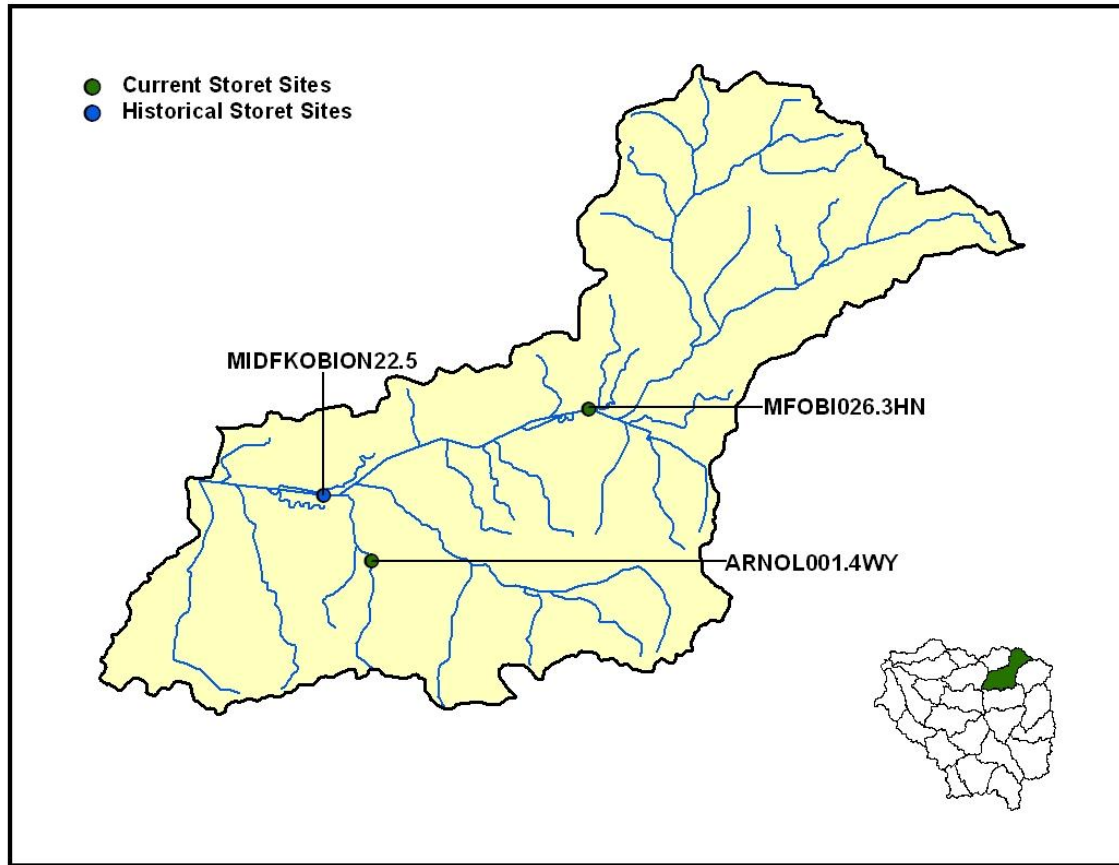
*Table 4-67. Population Estimates in Subwatershed 080102030302.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Gleason	Weakley	1,402	583	566	17	0

*Table 4-68. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030302.*

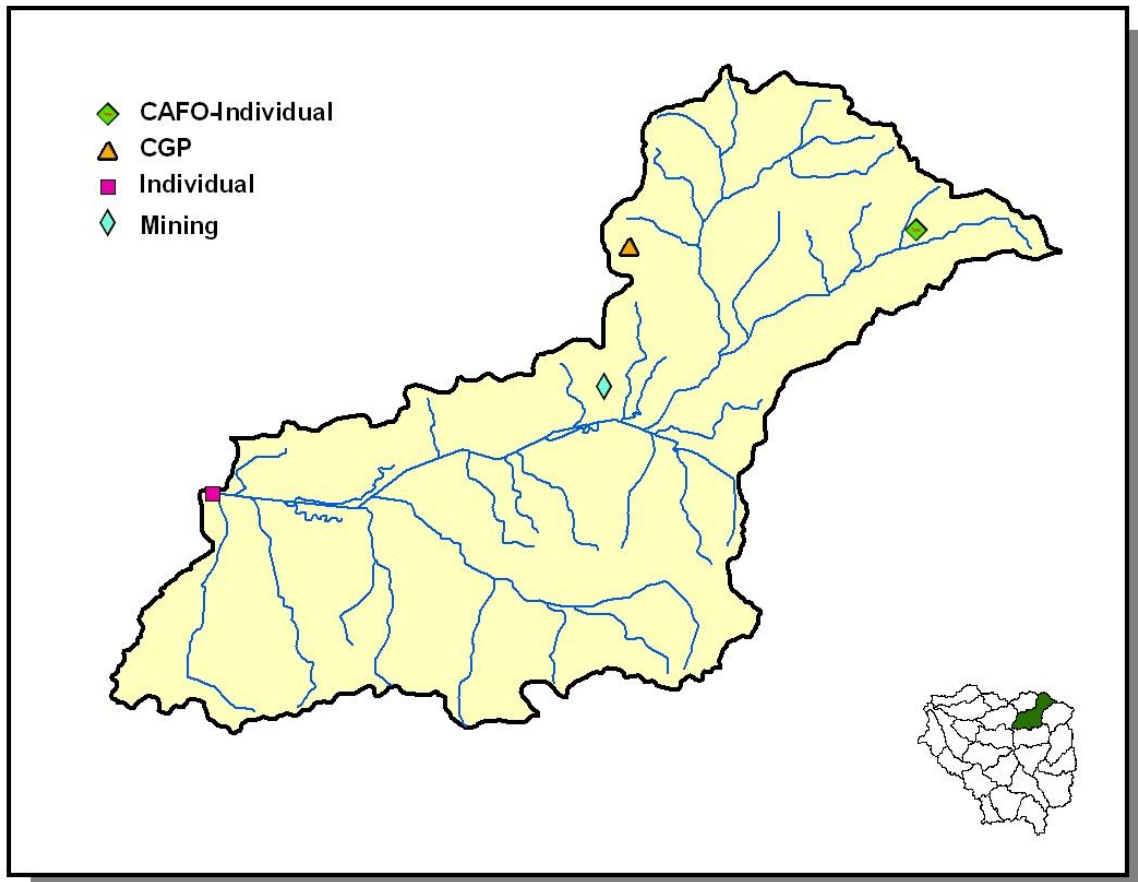
**4.2.J.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations located in subwatershed 080102030302.

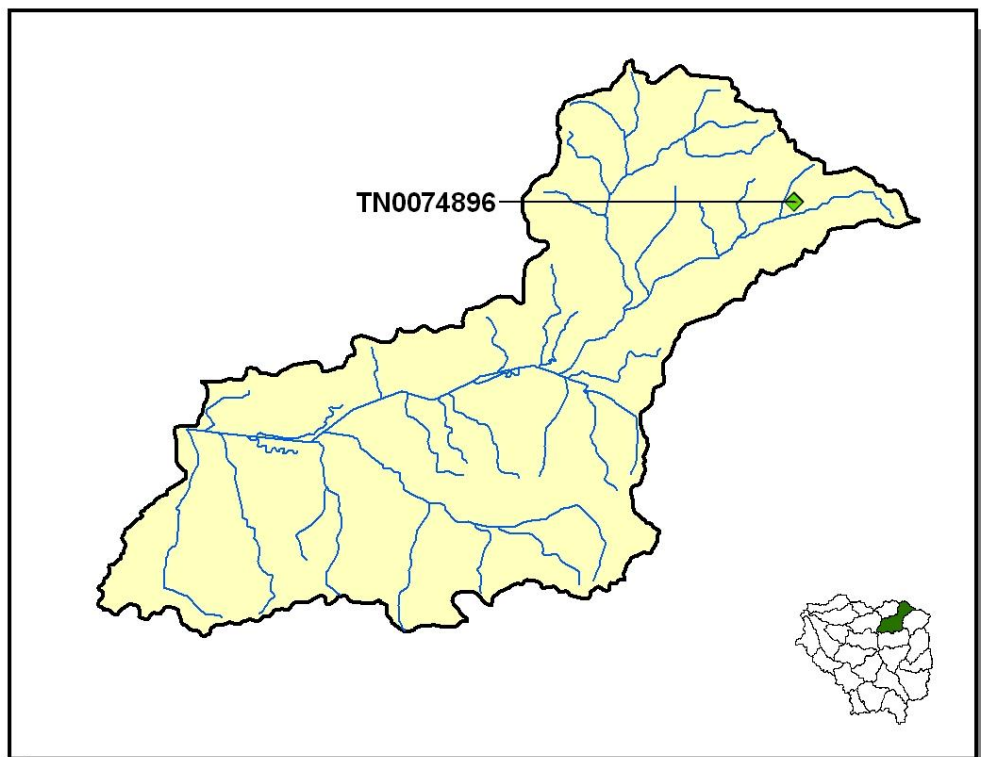


**Figure 4-99. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030302.** More information, including site names and locations, is provided in Appendix IV.

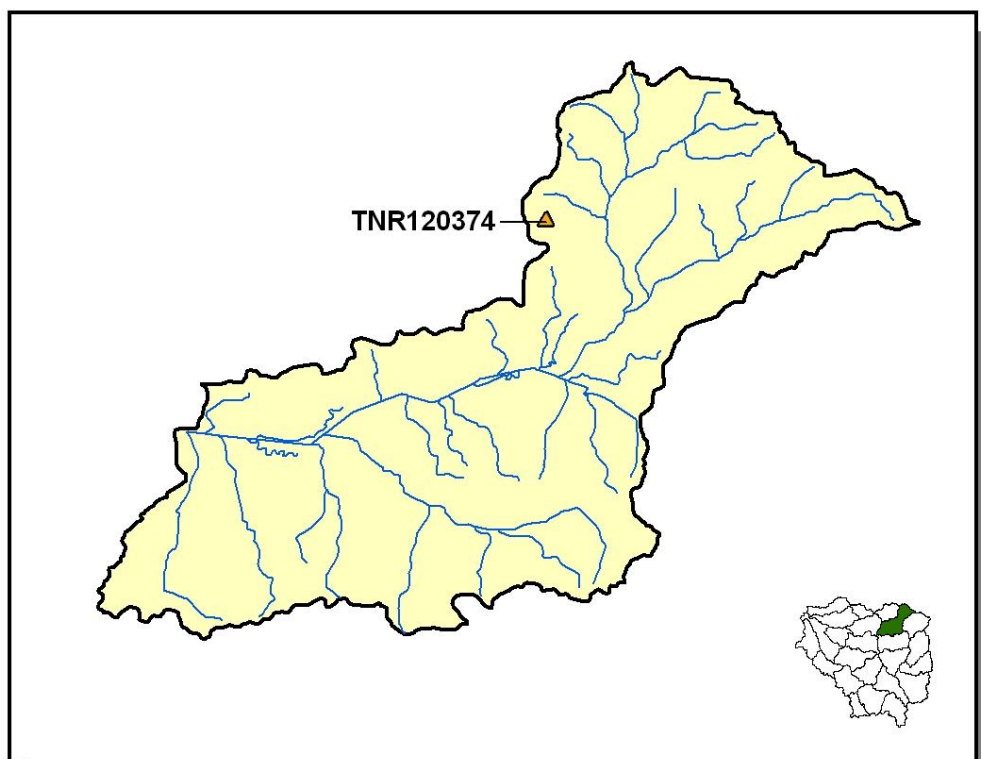
4.2.J.iii. Permitted Activities.



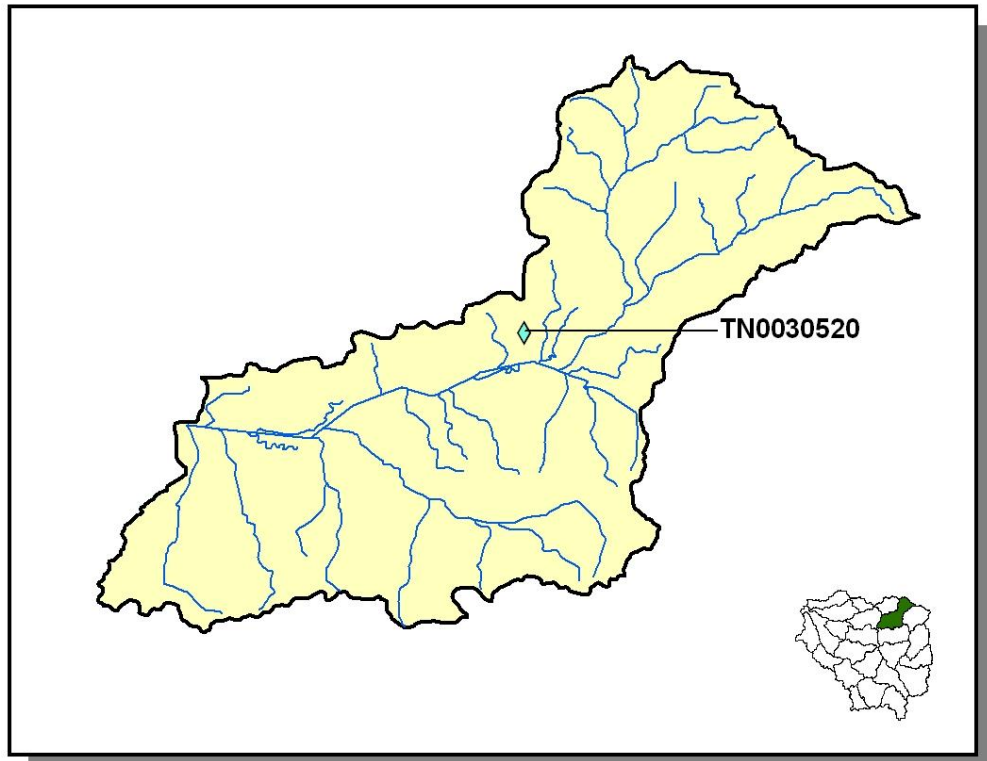
**Figure 4-100. Location of Permits Issued in Subwatershed 080102030302.** More information, including the names of facilities, is provided in Appendix IV.



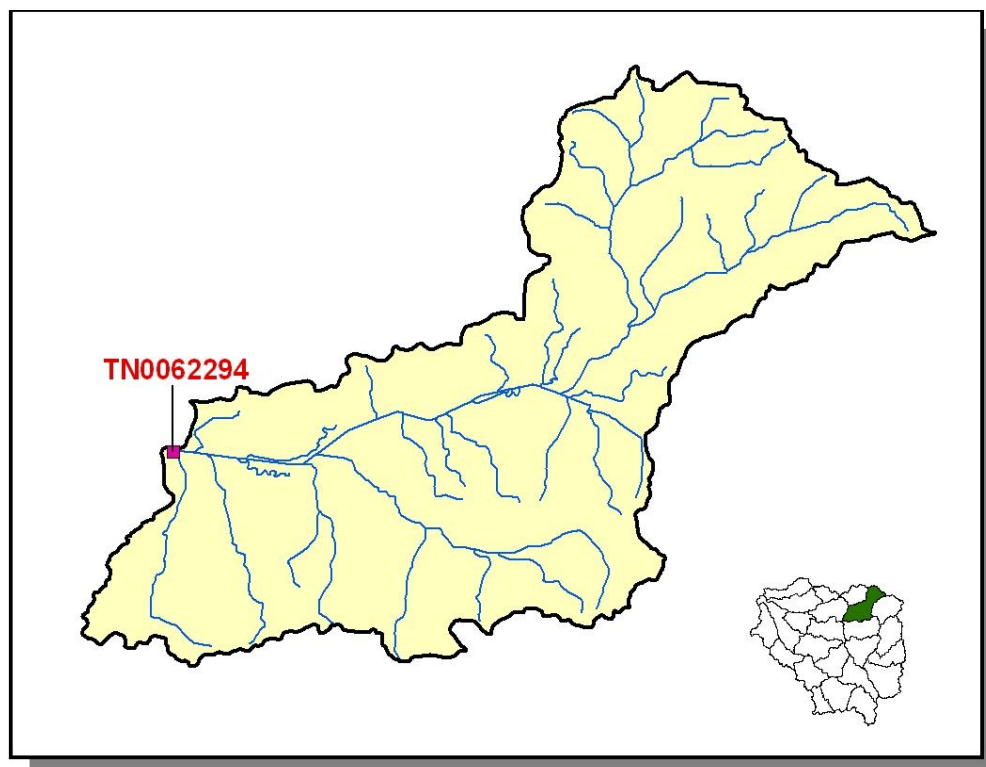
**Figure 4-101. Location of CAFO (Concentrated Animal Feed Operation) Permit Sites in Subwatershed 080102030302.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-102. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030302.** More information is provided in Appendix IV.



**Figure 4-103. Location of Permitted Mining Facilities in Subwatershed 080102030302.** More information is provided in Appendix IV.



**Figure 4-104. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030302.** Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the name of the facility is provided in Appendix IV.

PERMIT #	7Q10	DISCHARGE FLOW
TN0062294	30.6	0.2

**Table 4-69. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030302.** Data are in million gallons per day (MGD). Data were obtained from permit files.

PERMIT #	BOD <sub>5</sub>	BOD % REMOVAL	FLOW	E. coli	TRC	DO	pH	TSS	TSS % REMOVAL	SS
TN0062294	X	X	X	X	X	X	X	X	X	X

**Table 4-70. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030302.** BOD<sub>5</sub>, Biochemical Oxygen Demand (5-day); TRC, Total Residual Chlorine; DO, Dissolved Oxygen; TSS, Total Suspended Solids; SS, Settleable Solids.



**4.2.J.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Henry	8,920	20,299	1,793	29	36,205	89
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-71. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Henry	176.1	176.1	1.9	7.1
Weakley	96.1	95.9	6.7	24.6

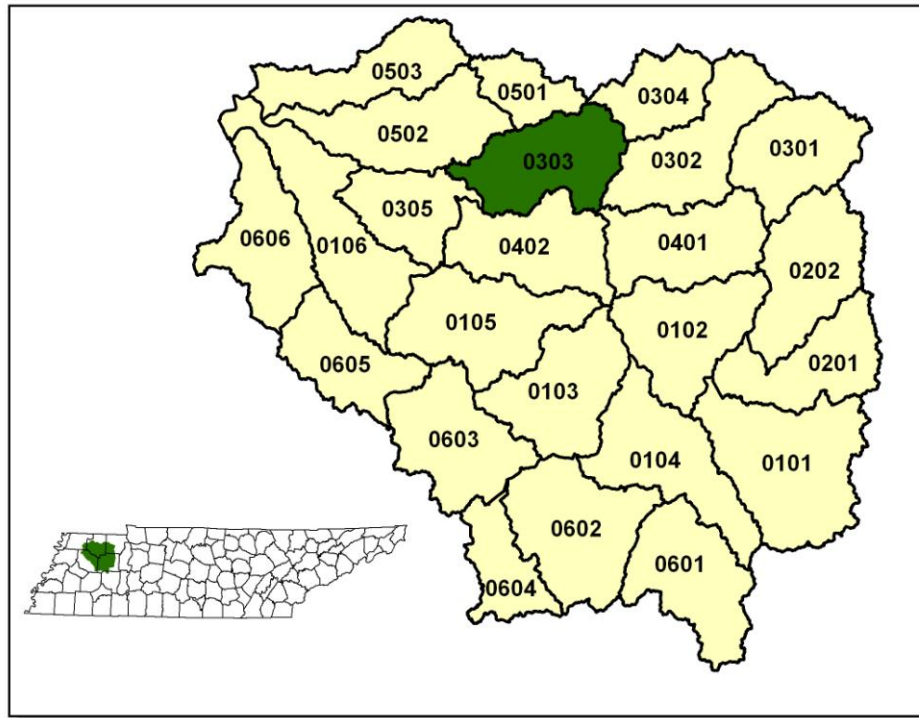
**Table 4-72. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Other (Horticultural)	16.41
Wheat (Close Grown Cropland)	7.76
Corn (Row Crops)	7.66
Soybeans (Row Crops)	6.93
Other Cropland not Planted	3.43
Legume (Pastureland)	1.47
Grass Forbs Legumes Mixed (Pastureland)	0.78
Conservation Reserve Program Land	0.50
Legume (Hayland)	0.49
Farmsteads and Ranch Headquarters	0.25
Grass (Hayland)	0.24
Grass (Pastureland)	0.19
Legume Grass (Hayland)	0.11

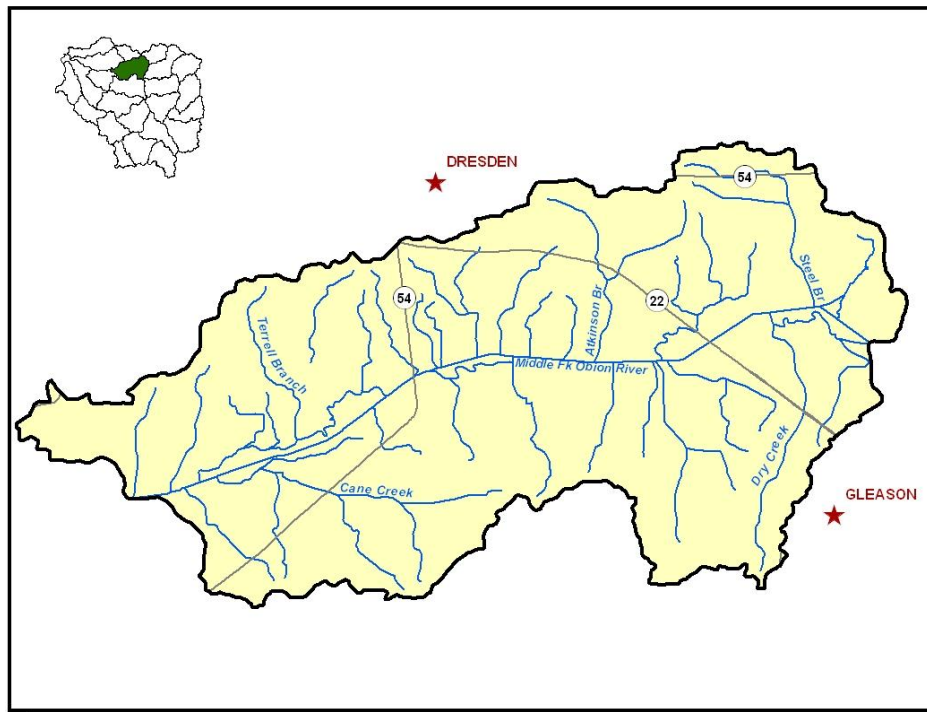
**Table 4-73. Annual Estimated Total Soil Loss in Subwatershed 080102030302.**

**4.2.K. 080102030303 (Middle Fork Obion River).**

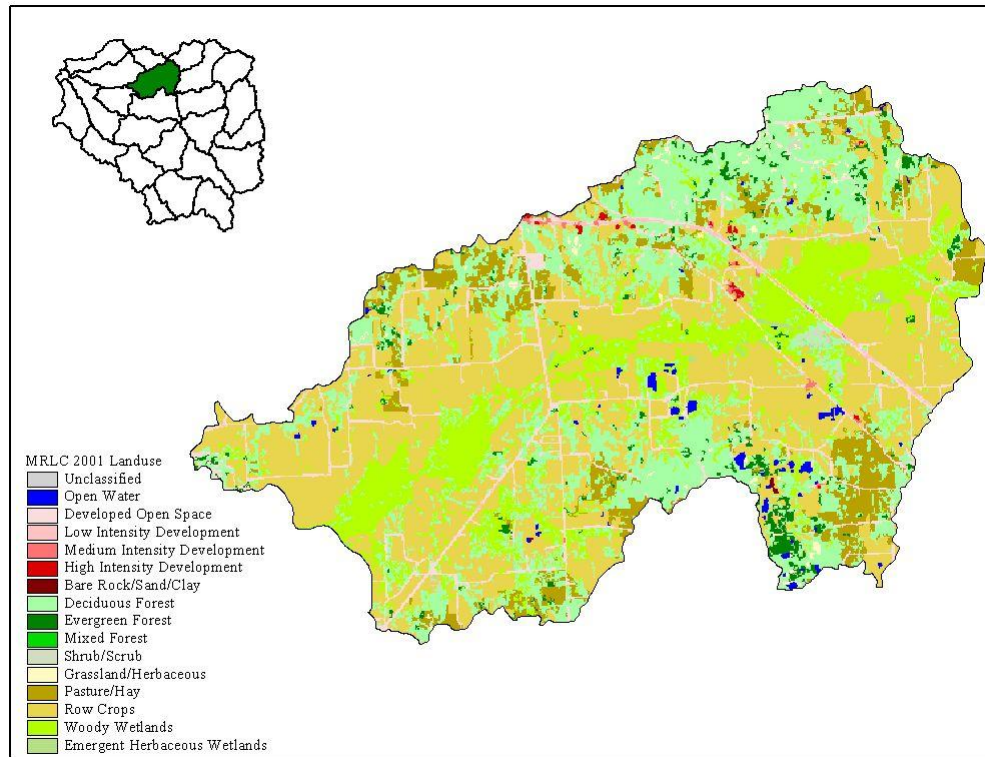
**4.2.K.i. General Description.**



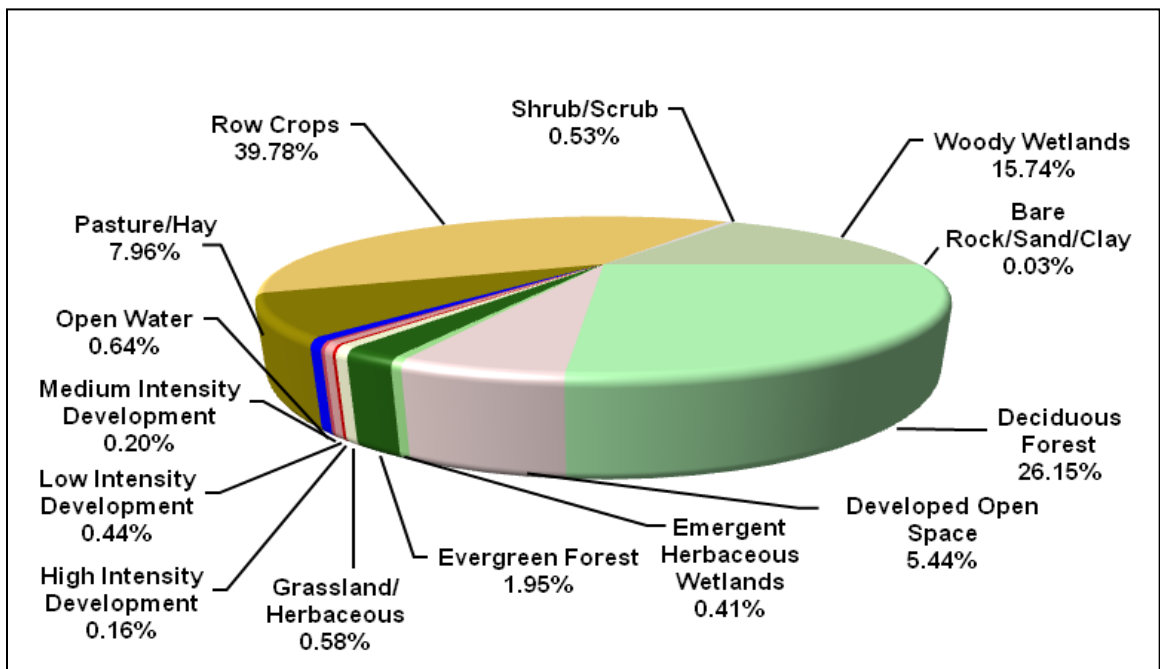
**Figure 4-105. Location of Subwatershed 080102030303.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



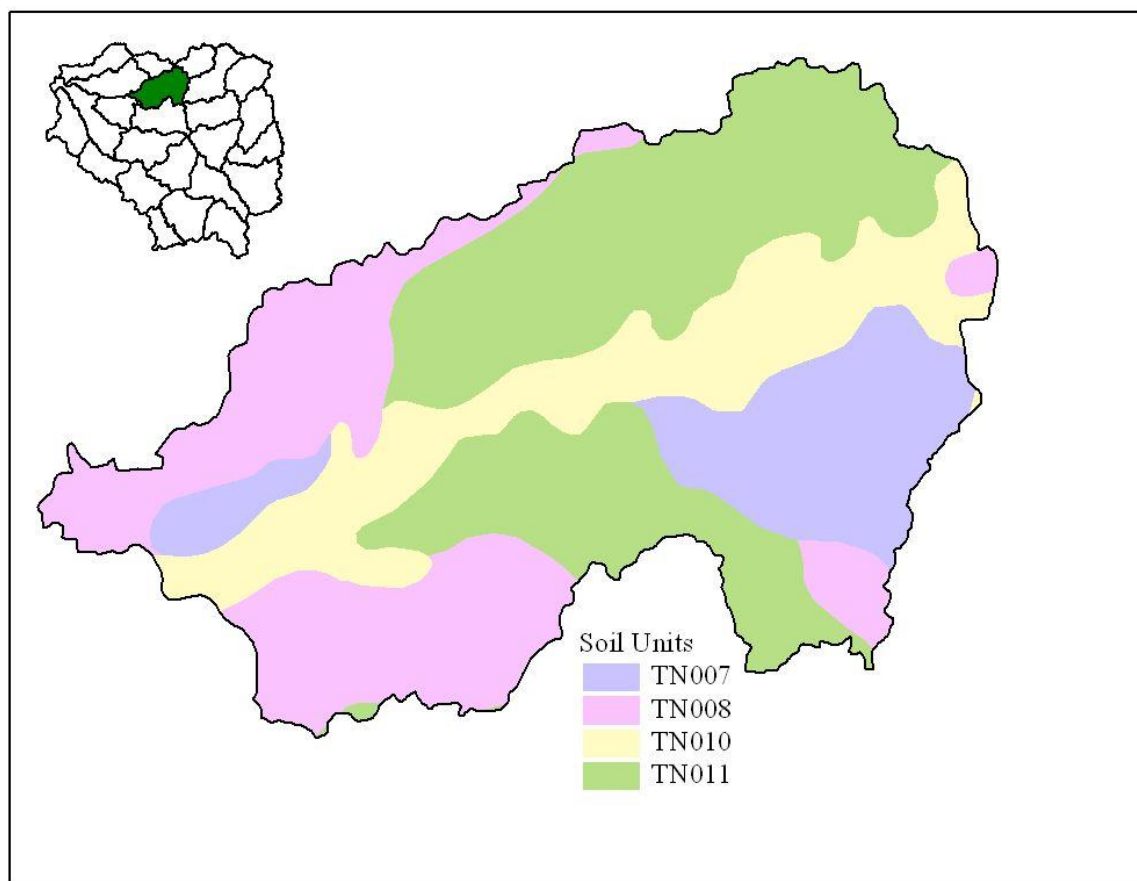
**Figure 4-106. Locational Details of Subwatershed 080102030303.**



**Figure 4-107. Illustration of Land Use Distribution in Subwatershed 080102030303.**



**Figure 4-108. Land Use Distribution in Subwatershed 080102030303.** More information is provided in Appendix IV.



**Figure 4-109. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030303.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40

**Table 4-74. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030303.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Weakley	31,972	32,808	34,895	8.57	2,740	2,812	2,991	9.20

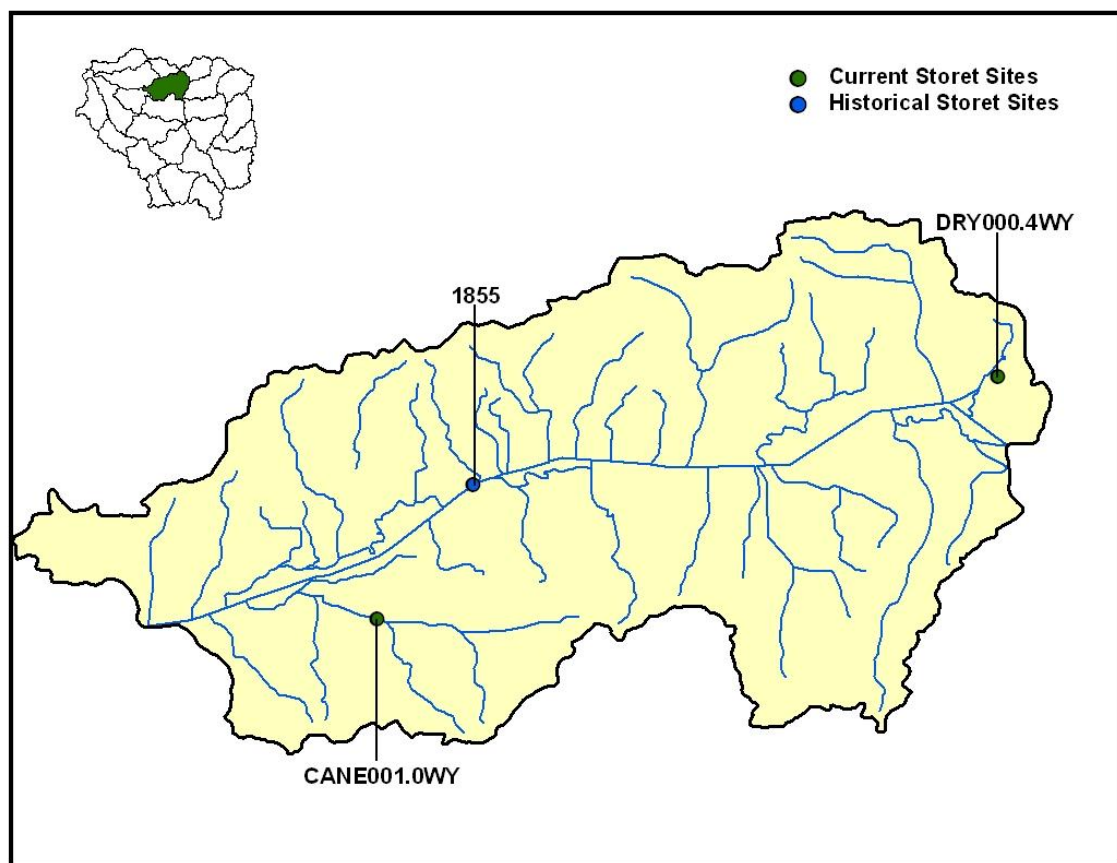
**Table 4-75. Population Estimates in Subwatershed 080102030303.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Dresden	Weakley	2,488	1,102	1,001	99	2
Gleason	Weakley	1,402	583	566	17	0
<b>Total</b>		<b>4,896</b>	<b>1,685</b>	<b>1,567</b>	<b>116</b>	<b>2</b>

**Table 4-76. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030303.**

**4.2.K.ii. USGS Gaging Stations and STORET Sites.**

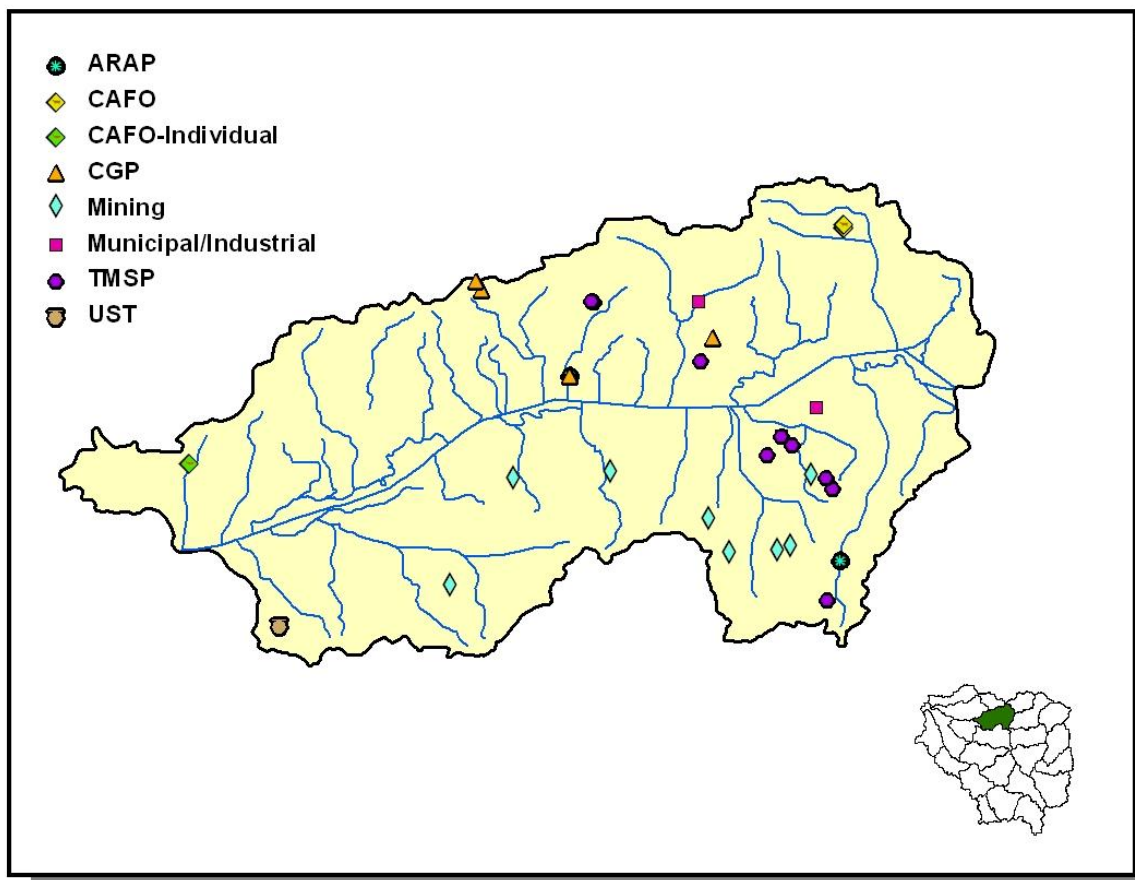
There are no USGS continuous record gaging stations located in subwatershed 080102030303.



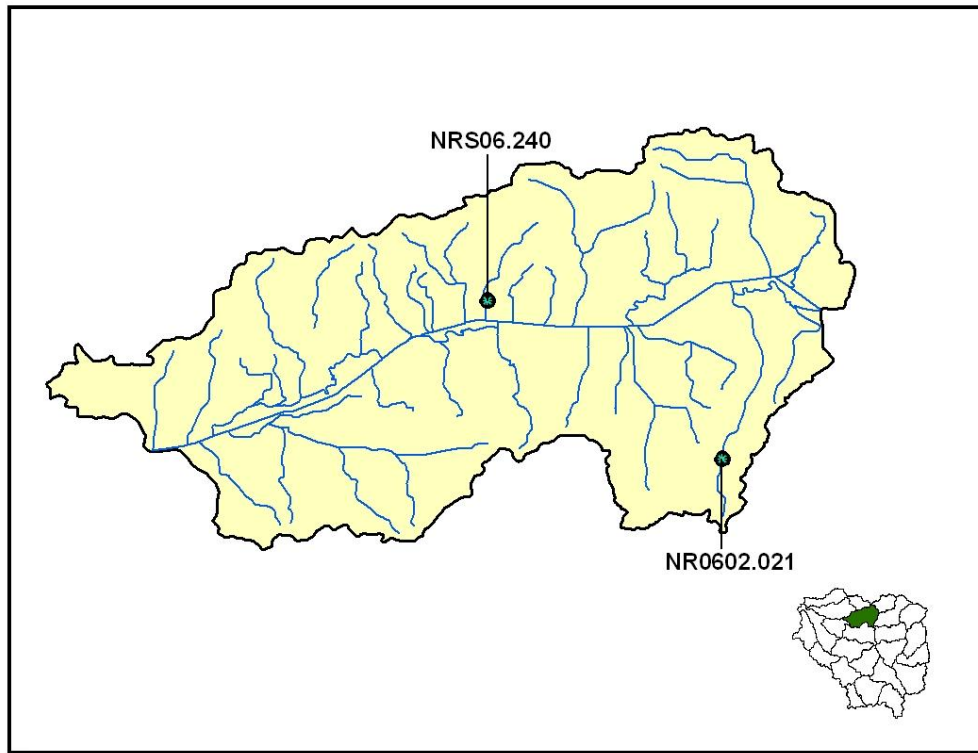
**Figure 4-110. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030303.** More information, including site names and locations, is provided in Appendix IV.



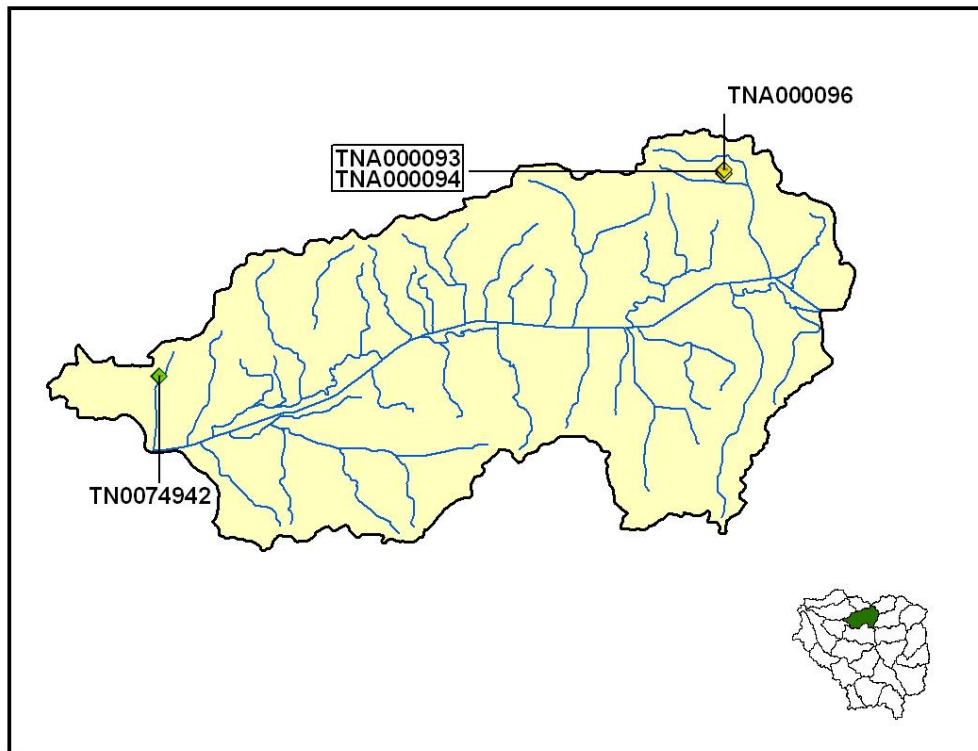
**4.2.K.iii. Permitted Activities.**



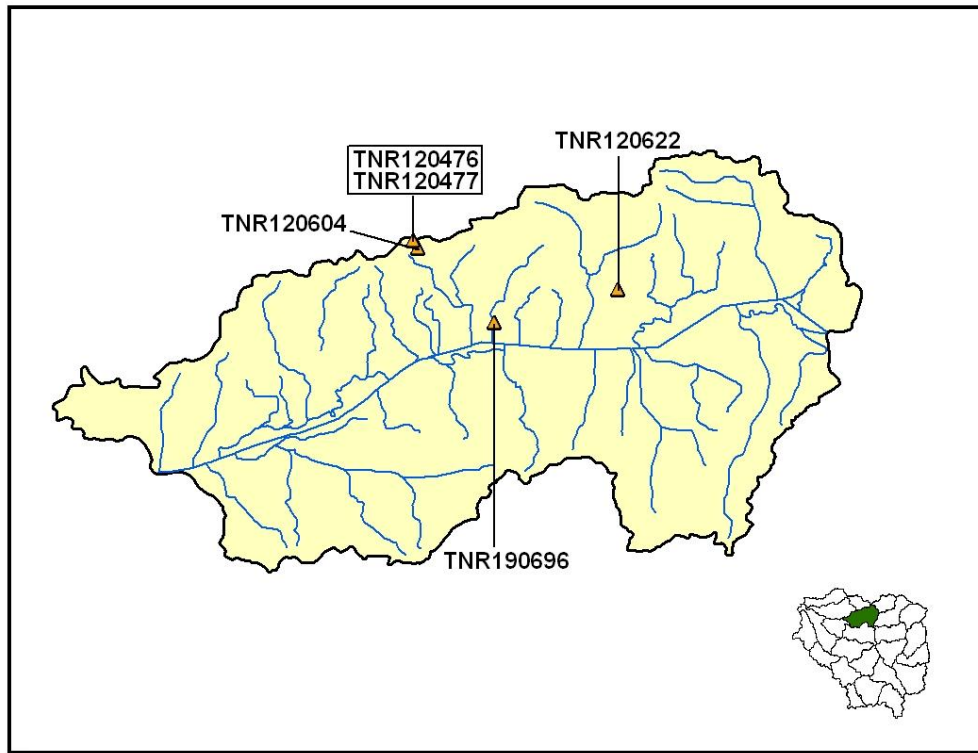
**Figure 4-111. Location of Permits Issued in Subwatershed 080102030303.** More information, including the names of facilities, is provided in Appendix IV.



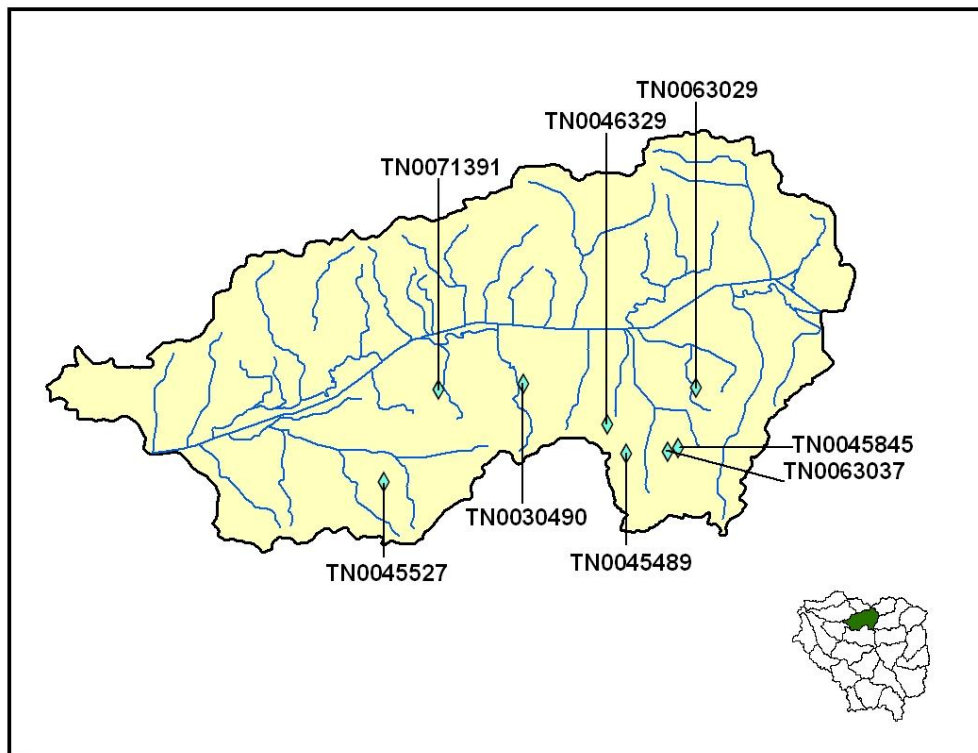
**Figure 4-112. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030303.** More information is provided in Appendix IV.



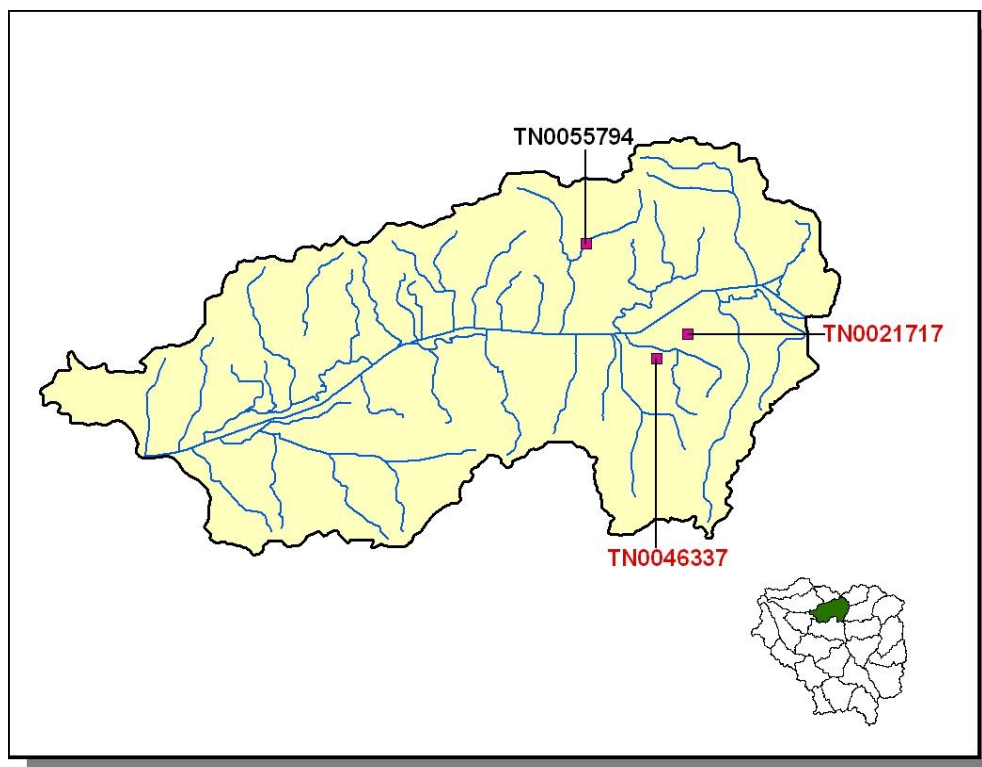
**Figure 4-113. Location of CAFO (Concentrated Animal Feed Operation) Permit Sites in Subwatershed 080102030303.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-114. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030303.** More information is provided in Appendix IV.



**Figure 4-115. Location of Permitted Mining Facilities in Subwatershed 080102030303.** More information is provided in Appendix IV.



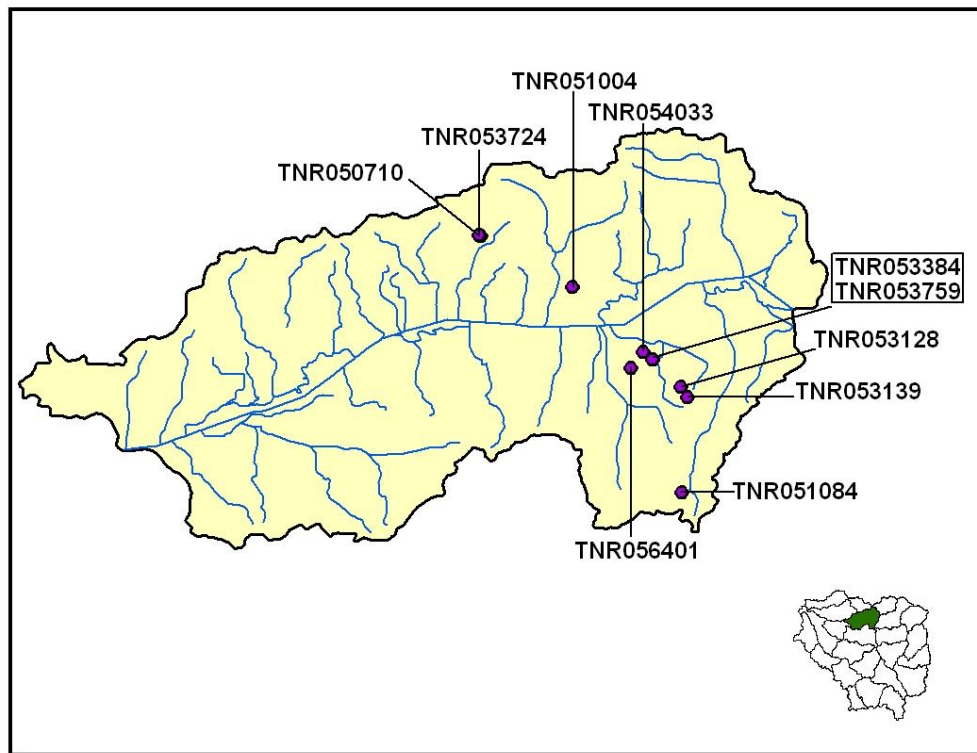
**Figure 4-116. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030303.** Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the name of the facility is provided in Appendix IV.

PERMIT #	7Q10	DISCHARGE FLOW
TN0021717	30.6	0.166
TN0046337	0.0	0.0045

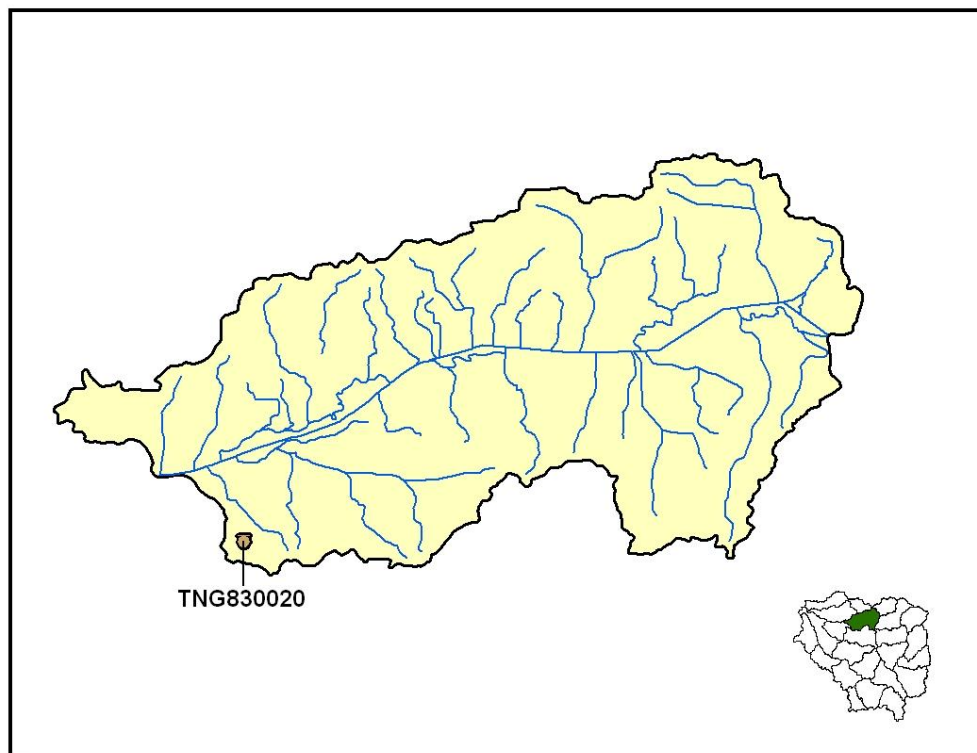
**Table 4-77. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030303.** Data are in million gallons per day (MGD). Data were obtained from permit files.

PERMIT #	BOD <sub>5</sub>	BOD % REMOVAL	AMMONIA AS N (TOTAL)	TKN	PHOSPHORUS TOTAL	NITRITE + NITRATE TOTAL	TRC	Fe	Al	FLOW	pH	TSS	SS
TN0021717	X	X	X	X	X	X	X			X	X	X	X
TN0046337								X	X	X	X	X	X

**Table 4-78. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030303.** BOD<sub>5</sub>, Biochemical Oxygen Demand (5-day); TKN, Total Kjeldahl Nitrogen; TRC, Total Residual Chlorine; TSS, Total Suspended Solids; SS, Settleable Solids.



**Figure 4-117. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030303.** More information is provided in Appendix IV.



**Figure 4-118. Location of Active UST Sites in Subwatershed 080102030303.** More information is provided in Appendix IV.

**4.2.K.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-79. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Weakley	96.1	95.9	6.7	24.6

**Table 4-80. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

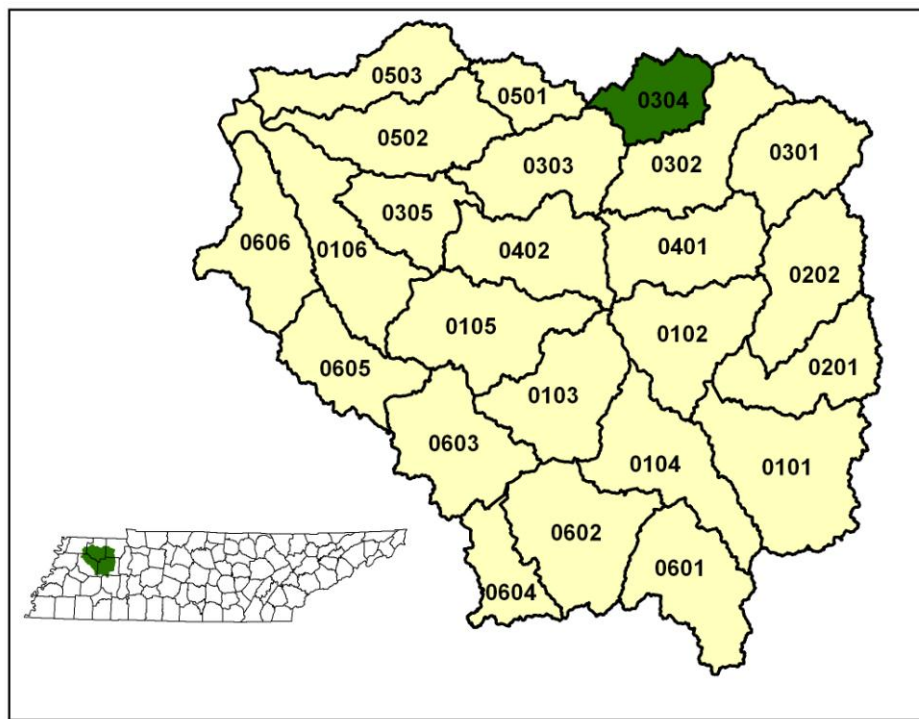
CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Wheat (Close Grown Cropland)	10.01
Soybeans (Row Crops)	7.63
Corn (Row Crops)	7.56
Other Cropland not Planted	4.50
Legume (Pastureland)	1.47
Grass Forbs Legumes Mixed (Pastureland)	1.11
Legume (Hayland)	0.49
Farmsteads and Ranch Headquarters	0.44
Conservation Reserve Program Land	0.43
Grass (Hayland)	0.23
Grass (Pastureland)	0.13

**Table 4-81. Annual Estimated Total Soil Loss in Subwatershed 080102030303.**

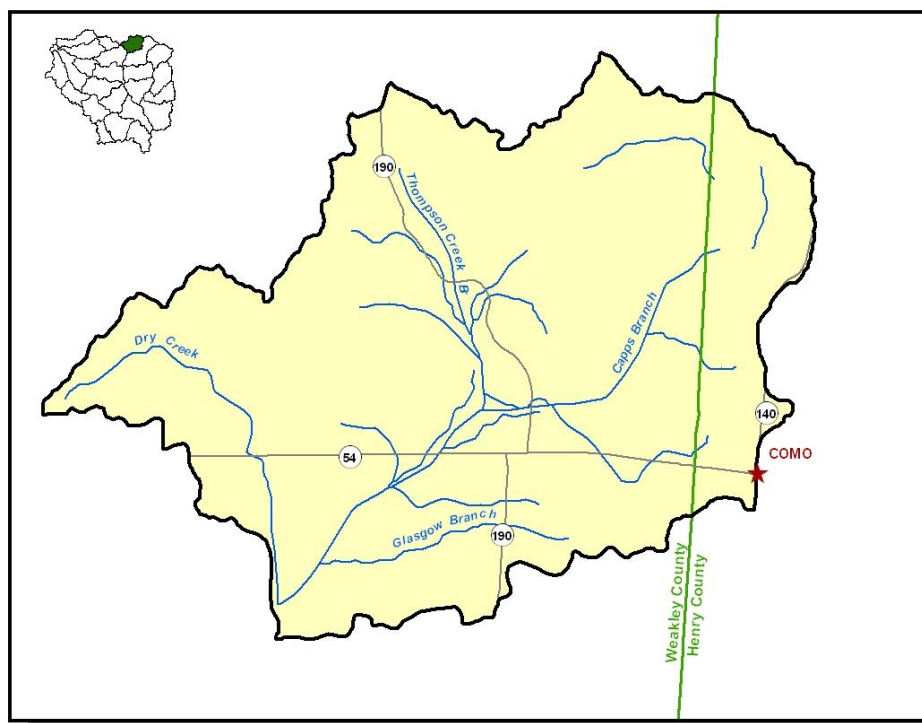


#### 4.2.L. 080102030304 (Thompson Creek).

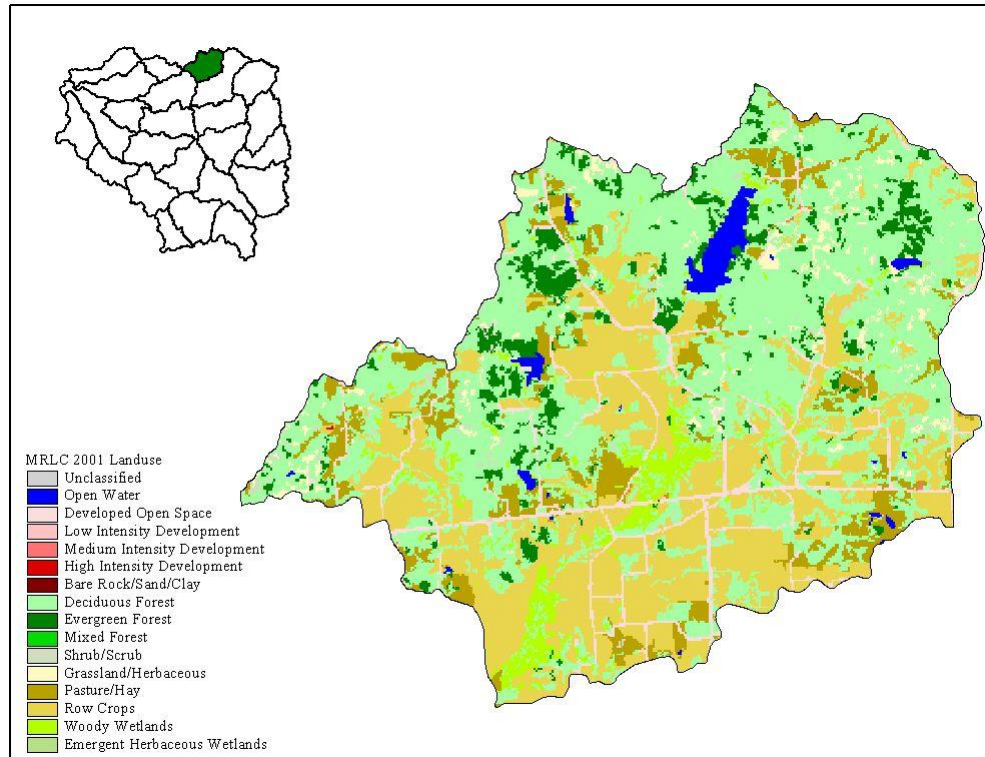
##### 4.2.L.i. General Description.



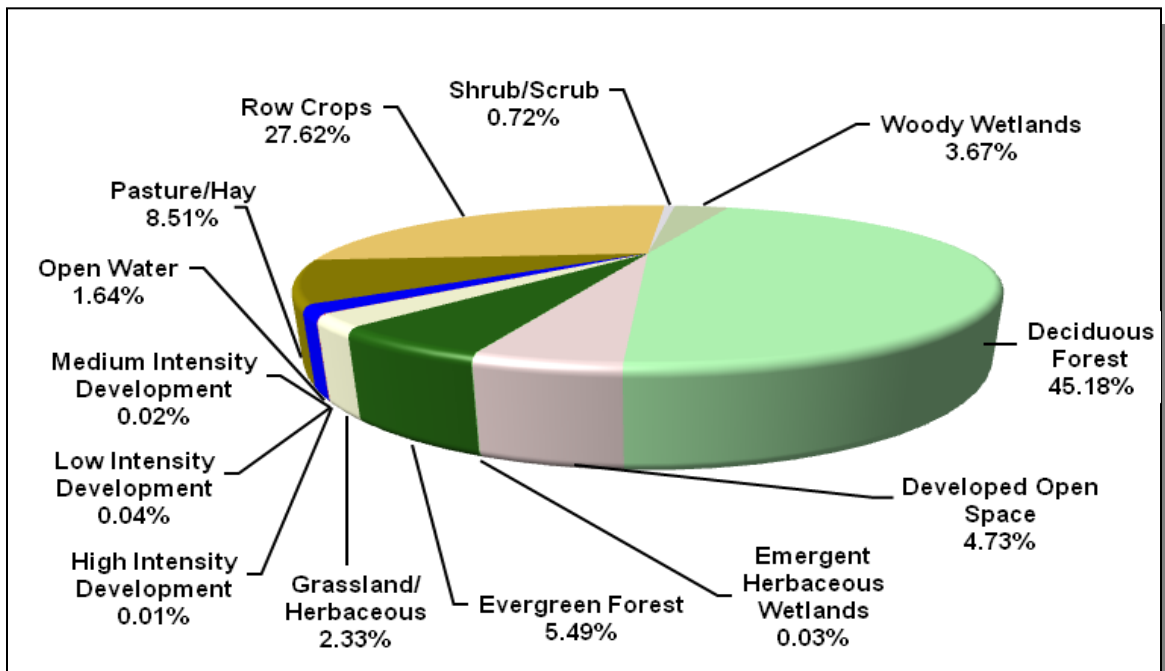
**Figure 4-119. Location of Subwatershed 080102030304.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



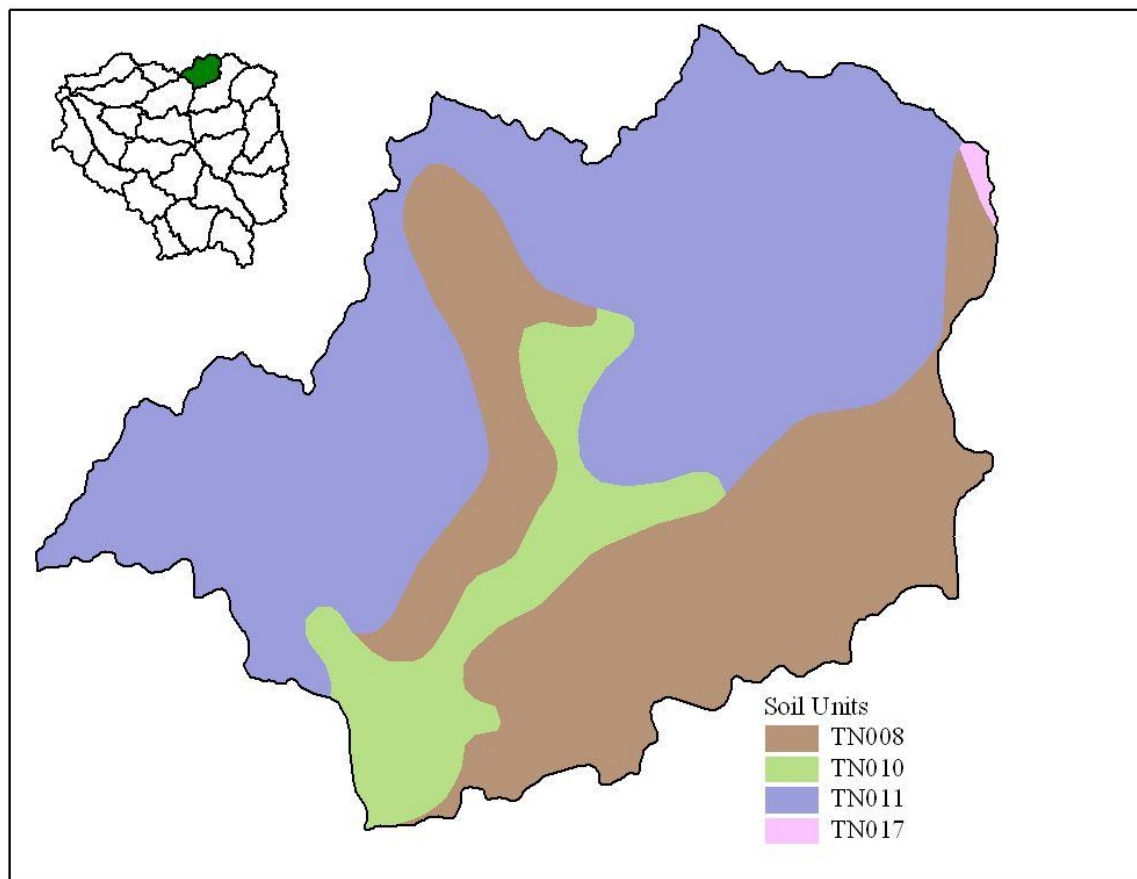
**Figure 4-120. Locational Details of Subwatershed 080102030304.**



**Figure 4-121. Illustration of Land Use Distribution in Subwatershed 080102030304.**



**Figure 4-122. Land Use Distribution in Subwatershed 080102030304.** More information is provided in Appendix IV.



**Figure 4-123. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030304.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40
TN017	0.00	B	1.81	5.26	Silty Loam	0.45

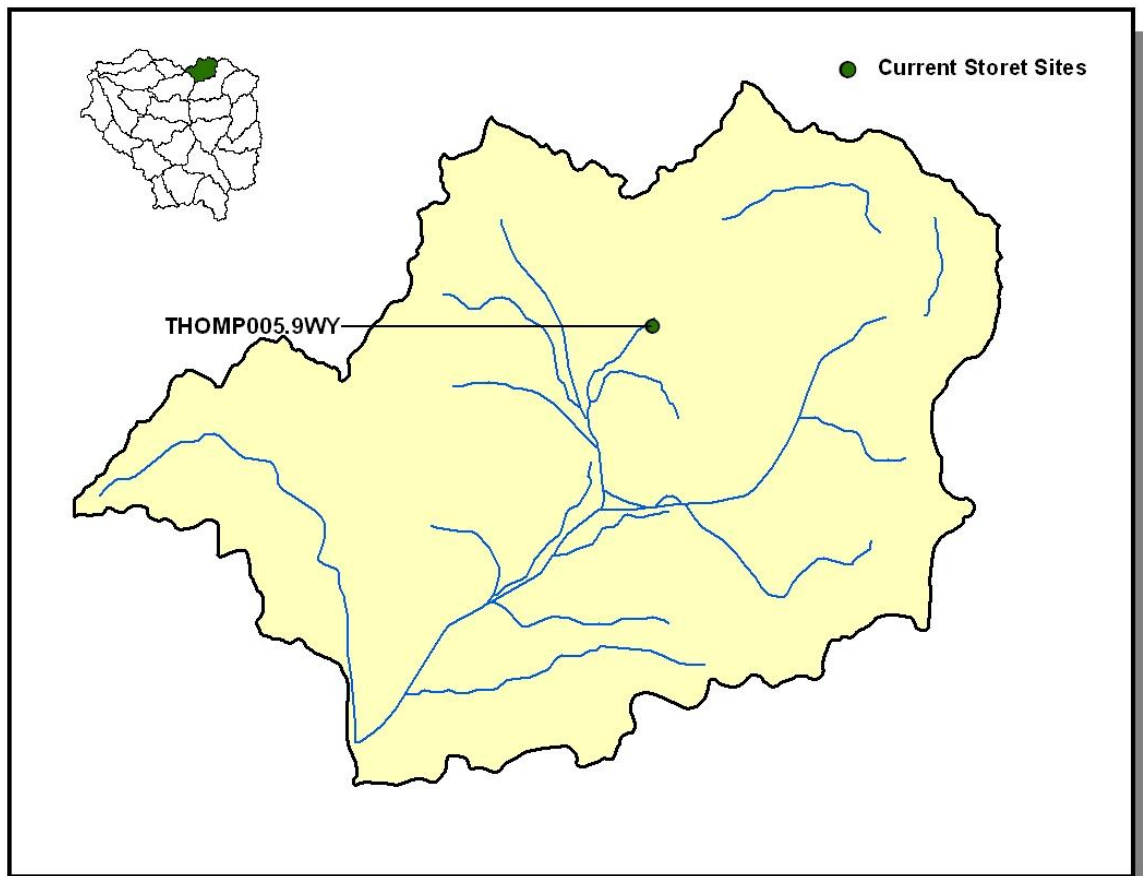
**Table 4-82. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030304.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Henry	27,888	29,830	31,115	0.46	127	136	142	11.8
Weakley	31,972	32,808	34,895	4.47	1,428	1,465	1,559	9.20
<b>Total</b>	<b>59,860</b>	<b>62,638</b>	<b>66,010</b>		<b>1,555</b>	<b>1,601</b>	<b>1,701</b>	<b>9.40</b>

**Table 4-83. Population Estimates in Subwatershed 080102030304.**

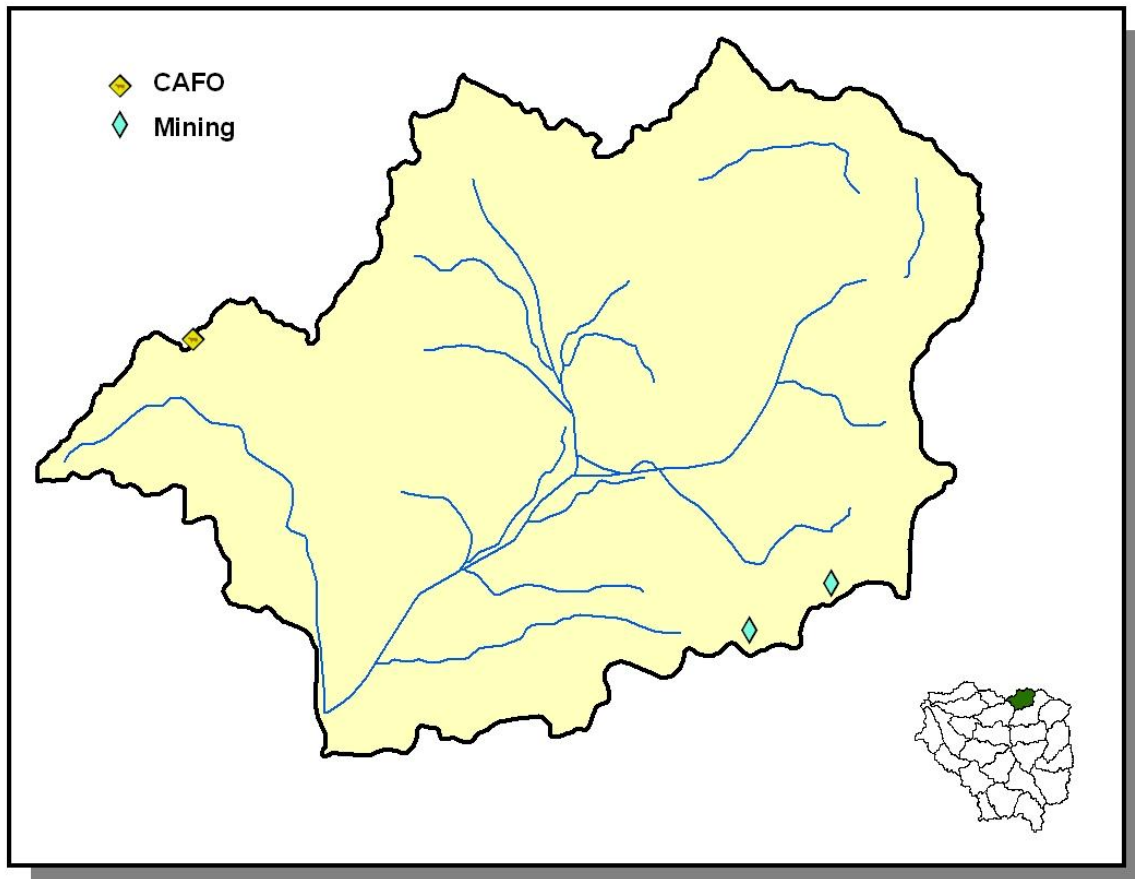
**4.2.L.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations located in subwatershed 080102030304.

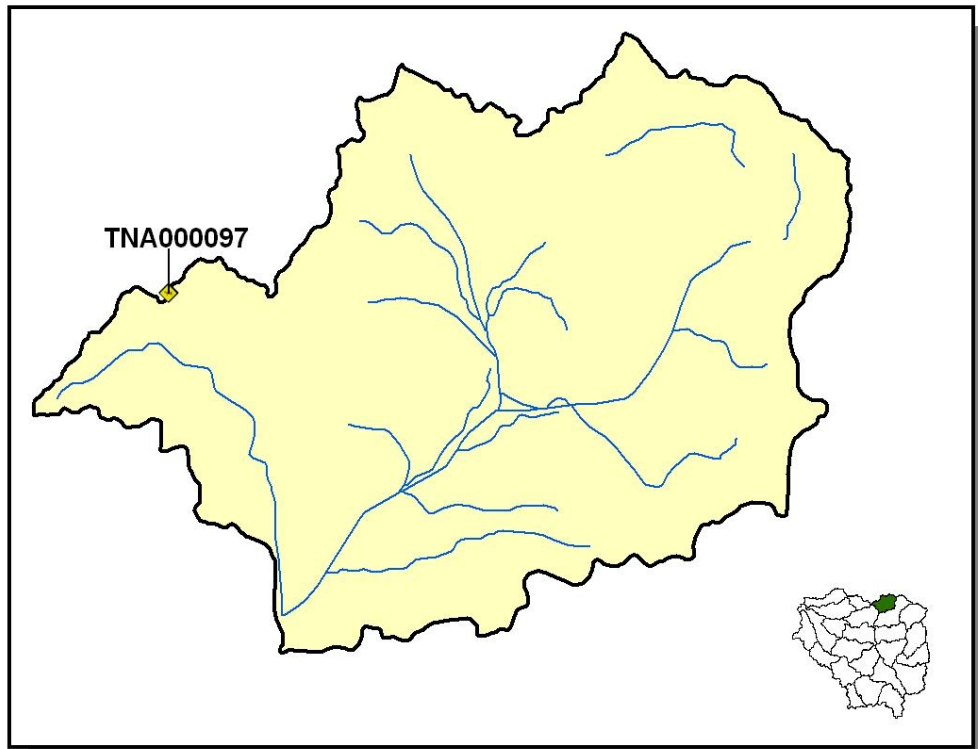


**Figure 4-124. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030304.** More information, including site names and locations, is provided in Appendix IV.

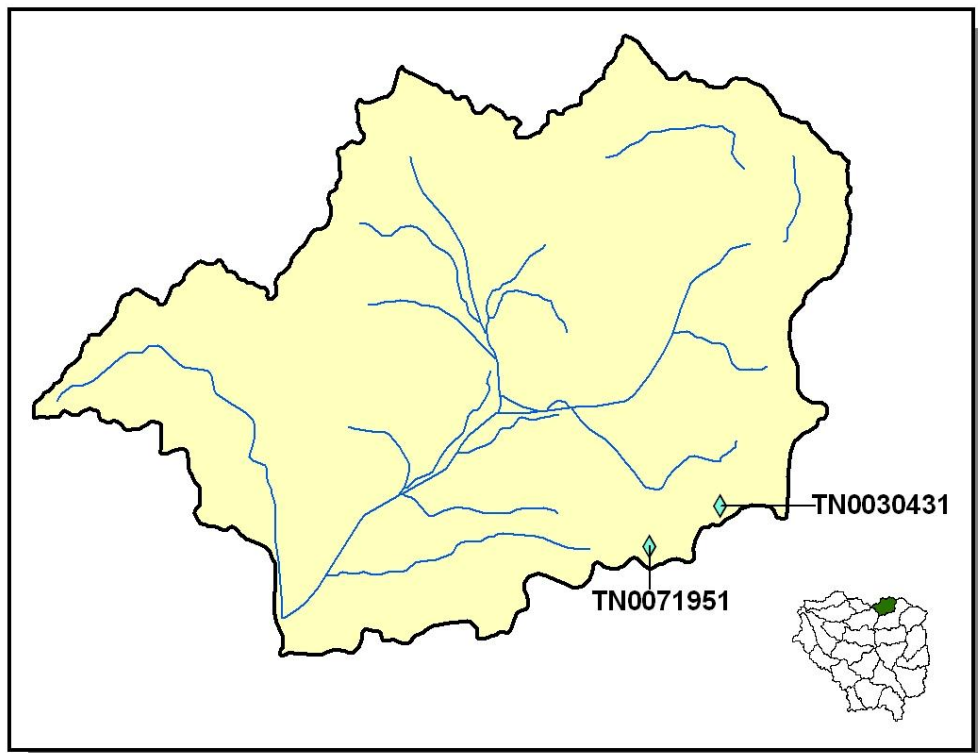
**4.2.L.iii. Permitted Activities.**



**Figure 4-125. Location of Permits Issued in Subwatershed 080102030304.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-126. Location of CAFO (Concentrated Animal Feed Operation) Permit Sites in Subwatershed 080102030304.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-127. Location of Permitted Mining Facilities in Subwatershed 080102030304.** More information is provided in Appendix IV.



**4.2.L.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Henry	8,920	20,299	1,793	29	36,205	89
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-84. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Henry	176.1	176.1	1.9	7.1
Weakley	96.1	95.9	6.7	24.6

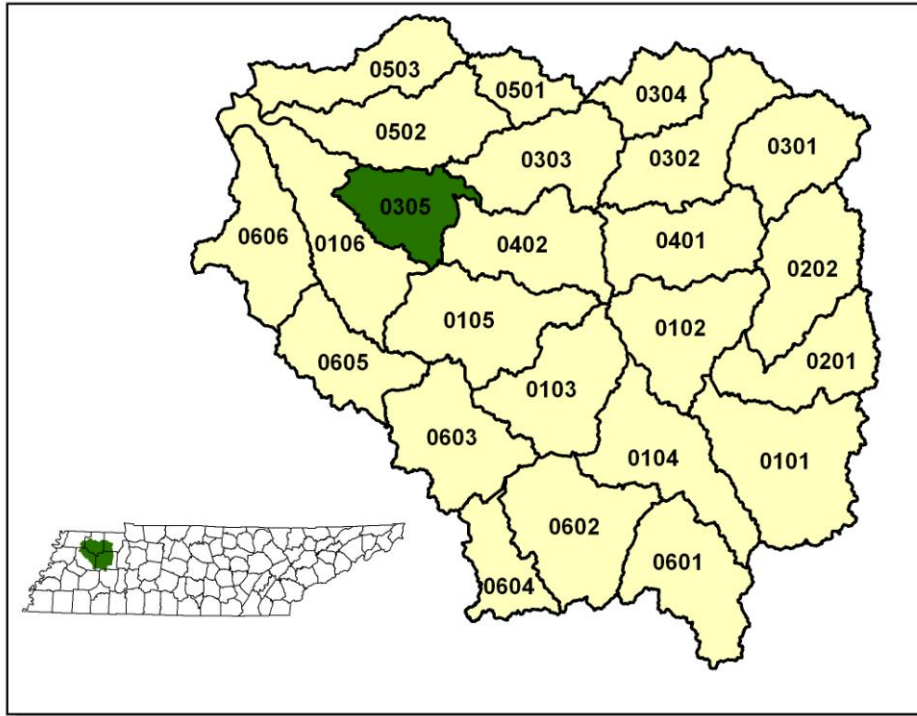
**Table 4-85. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Other (Horticultural)	16.41
Wheat (Close Grown Cropland)	9.63
Corn (Row Crops)	7.58
Soybeans (Row Crops)	7.51
Other Cropland not Planted	4.31
Legume (Pastureland)	1.47
Grass Forbs Legumes Mixed (Pastureland)	1.05
Legume (Hayland)	0.49
Conservation Reserve Program Land	0.44
Farmsteads and Ranch Headquarters	0.40
Grass (Hayland)	0.23
Grass (Pastureland)	0.14
Legume Grass (Hayland)	0.11

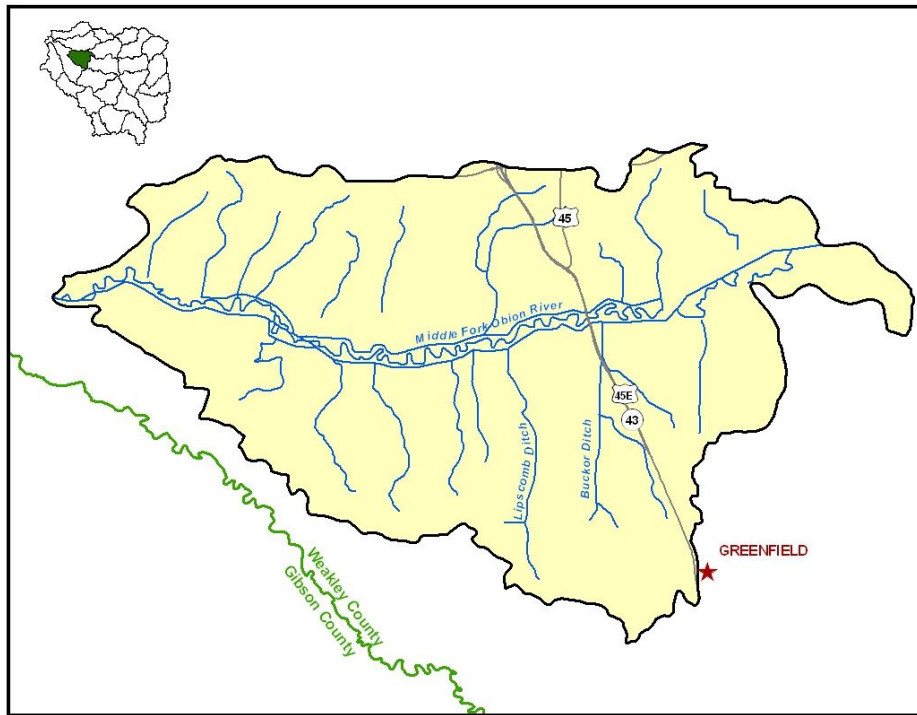
**Table 4-86. Annual Estimated Total Soil Loss in Subwatershed 080102030304.**

#### 4.2.M. 080102030305 (Middle Fork Obion River).

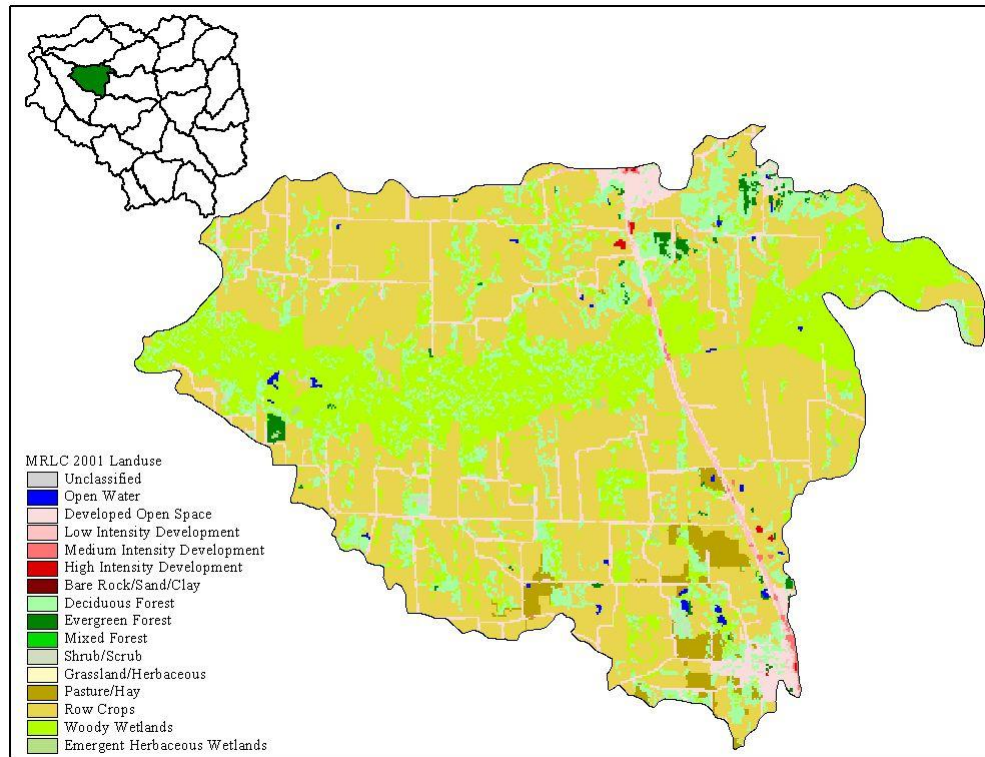
##### 4.2.M.i. General Description.



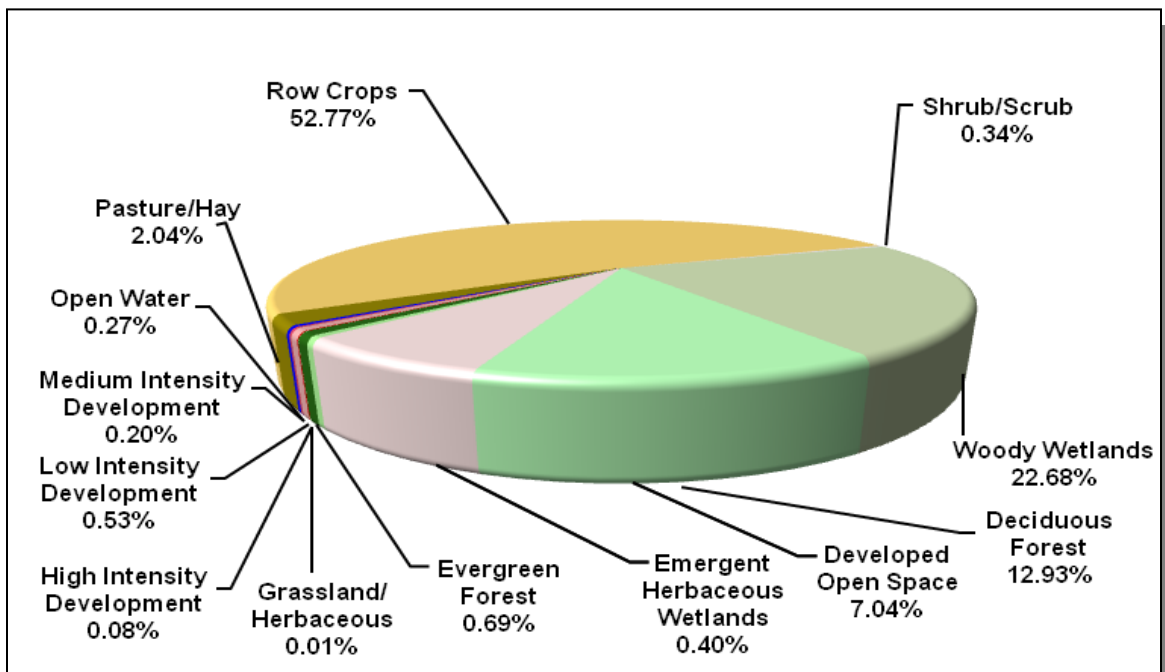
**Figure 4-128. Location of Subwatershed 080102030305.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



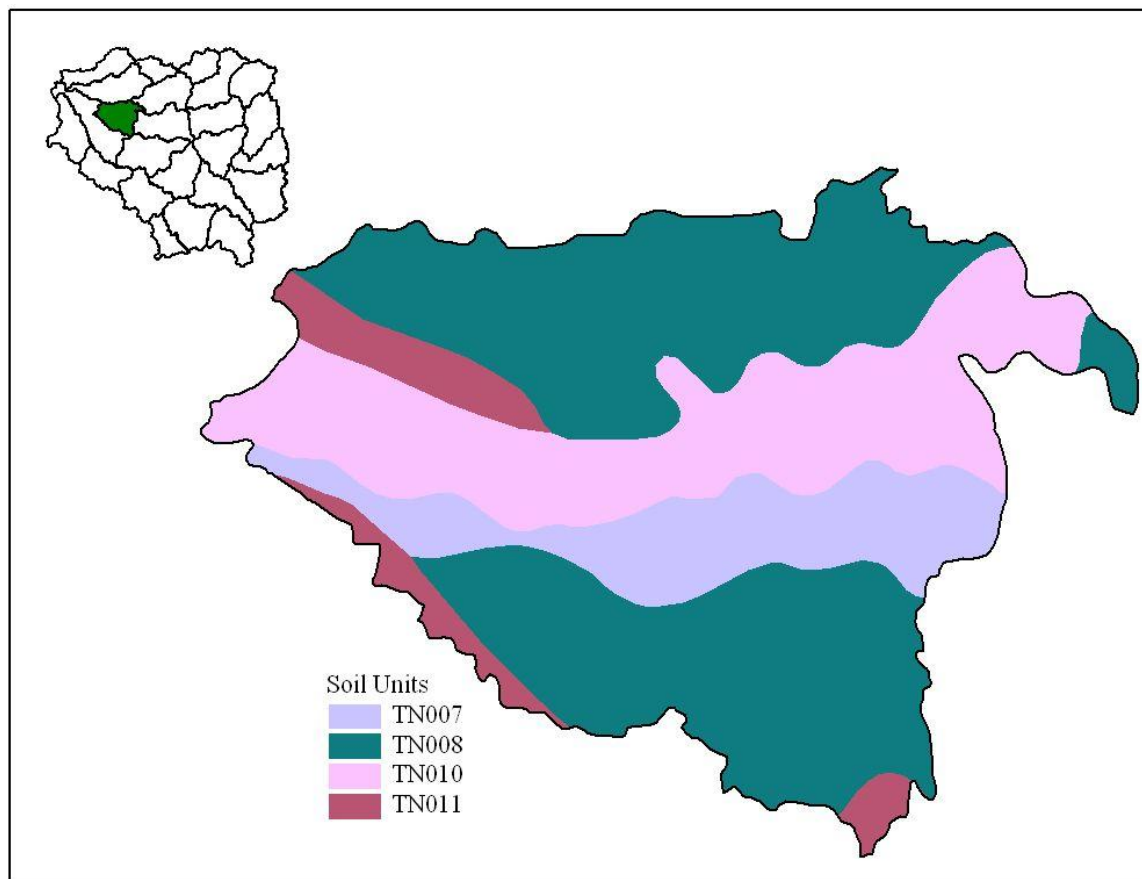
**Figure 4-129. Locational Details of Subwatershed 080102030305.**



**Figure 4-130. Illustration of Land Use Distribution in Subwatershed 080102030305.**



**Figure 4-131. Land Use Distribution in Subwatershed 080102030305.** More information is provided in Appendix IV.



**Figure 4-132. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030305.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40

**Table 4-87. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030305.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Gibson	46,315	48,083	48,152	0.03	15	15	15	0.00
Weakley	31,972	32,808	34,895	5.89	1,884	1,933	2,056	9.10
<b>Total</b>	<b>78,287</b>	<b>80,891</b>	<b>83,047</b>		<b>1,899</b>	<b>1,948</b>	<b>2,071</b>	<b>9.10</b>

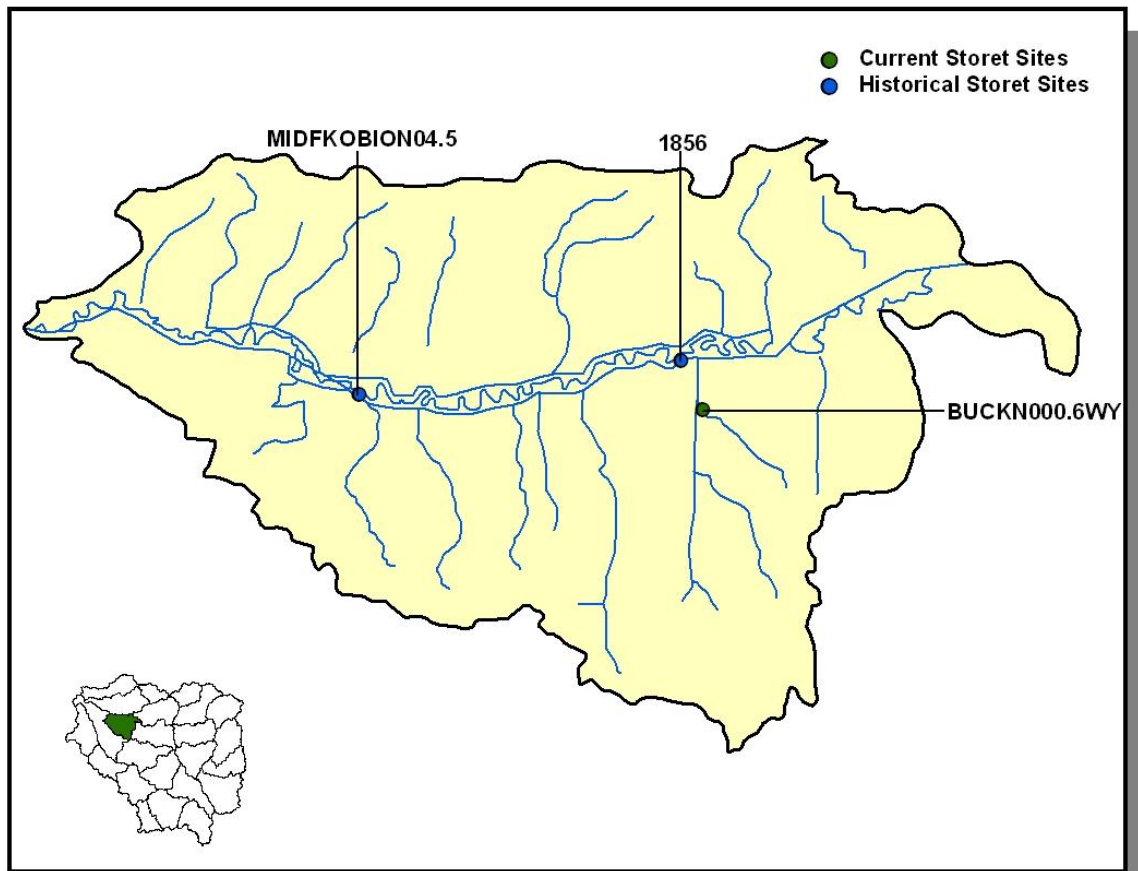
*Table 4-88. Population Estimates in Subwatershed 080102030305.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Greenfield	Weakley	2,105	949	900	46	3
Sharon	Weakley	1,047	493	473	20	0
<b>Total</b>		<b>3,152</b>	<b>1,442</b>	<b>1,373</b>	<b>66</b>	<b>3</b>

*Table 4-89. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030305.*

**4.2.M.ii. USGS Gaging Stations and STORET Sites.**

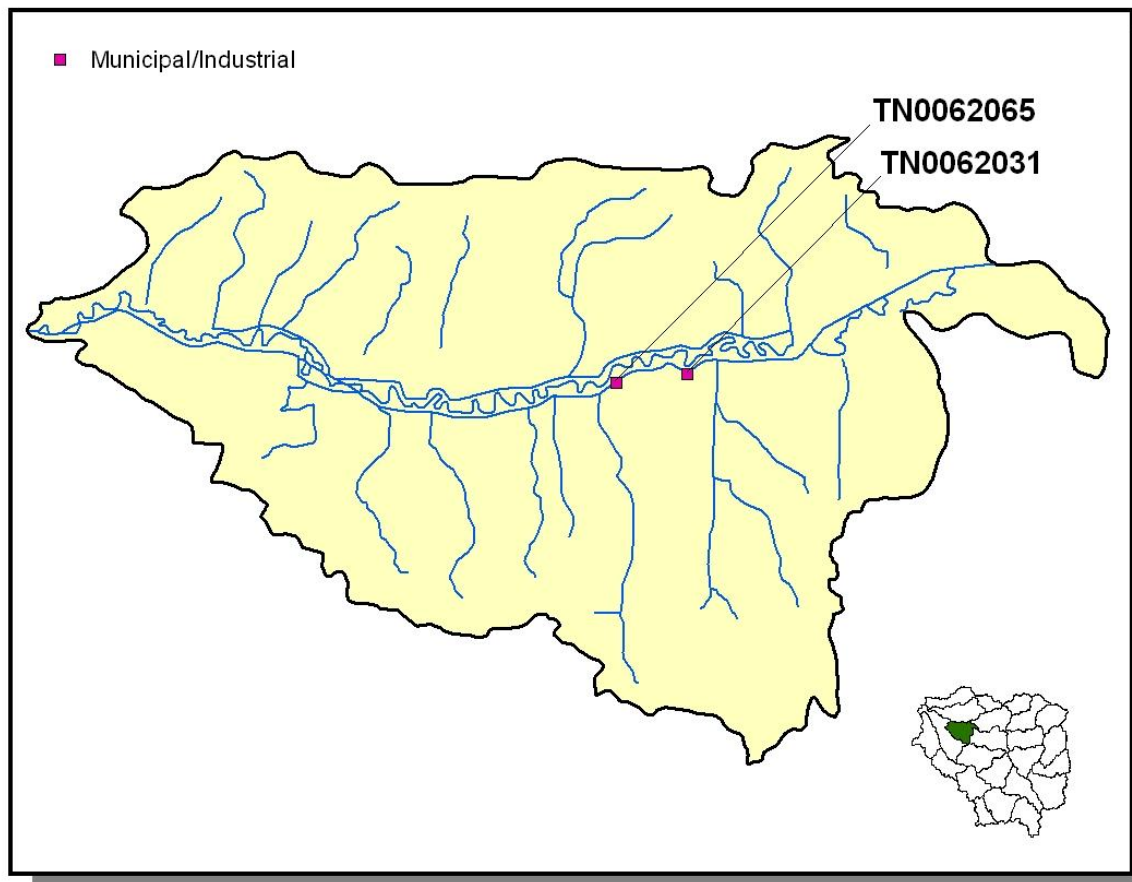
There are no USGS continuous record gaging stations located in subwatershed 080102030305.



**Figure 4-133. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030305.** More information, including site names and locations, is provided in Appendix IV.



**4.2.M.iii. Permitted Activities.**



**Figure 4-134. Location of Permits Issued in Subwatershed 080102030305.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.M.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Gibson	9,766	21,779	221	605	7,506	74
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-90. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Gibson	36.4	36.4	2.0	8.6
Weakley	96.1	95.9	6.7	24.6

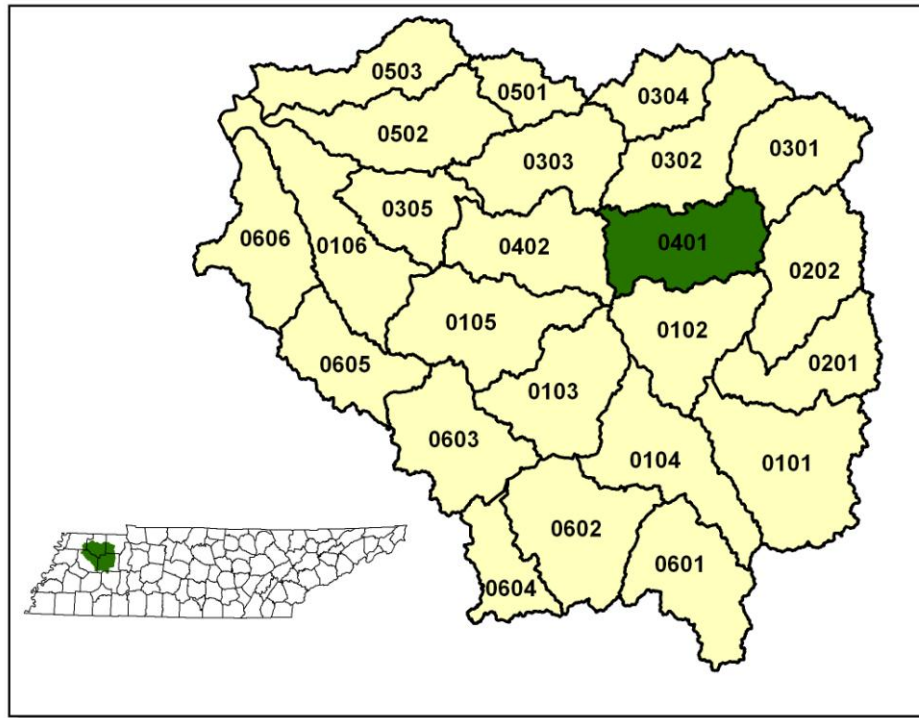
**Table 4-91. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Cotton (Row Crops)	17.21
Wheat (Close Grown Cropland)	10.01
Soybeans (Row Crops)	7.64
Corn (Row Crops)	7.59
Sorghum (Row Crops)	6.38
Other Cropland not Planted	4.47
Legume (Pastureland)	1.47
Other Land in Farms	1.34
Grass Forbs Legumes Mixed (Pastureland)	1.11
Legume (Hayland)	0.49
Farmsteads and Ranch Headquarters	0.43
Conservation Reserve Program Land	0.43
Grass (Hayland)	0.23
Grass (Pastureland)	0.13

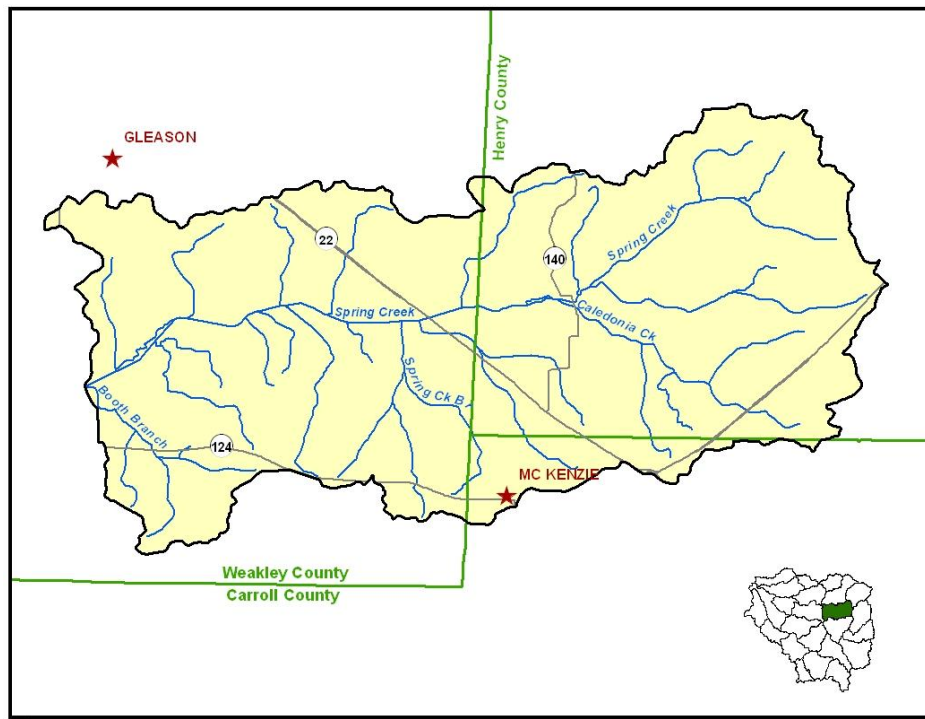
**Table 4-92. Annual Estimated Total Soil Loss in Subwatershed 080102030305.**

**4.2.N. 080102030401 (Spring Creek, Upper).**

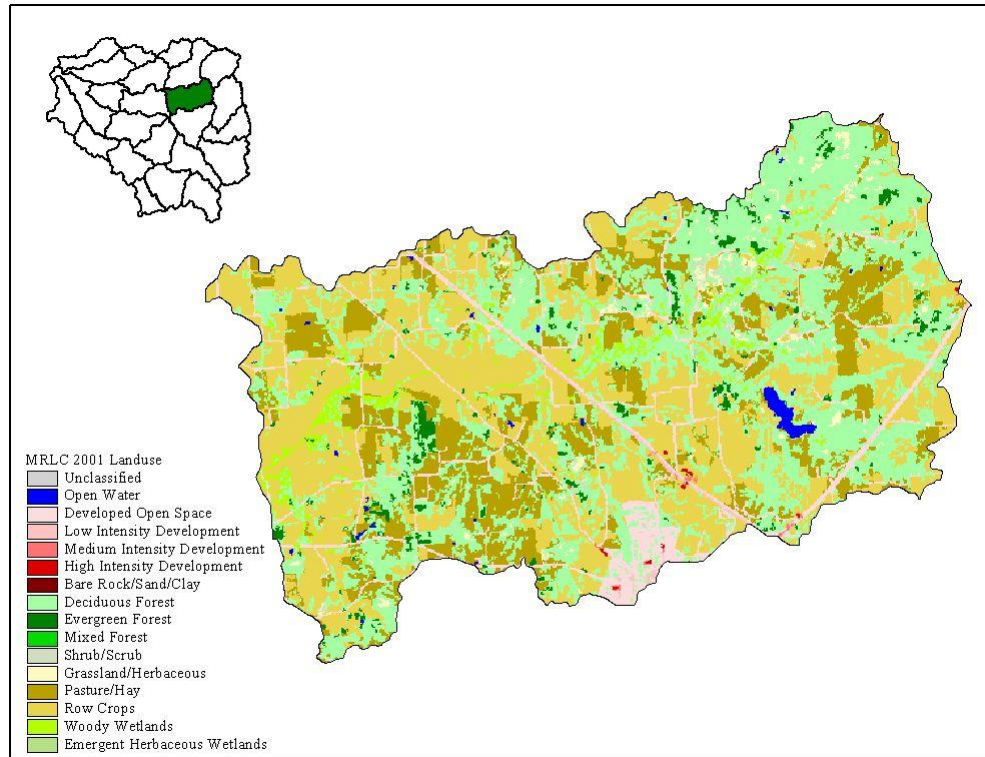
**4.2.N.i. General Description.**



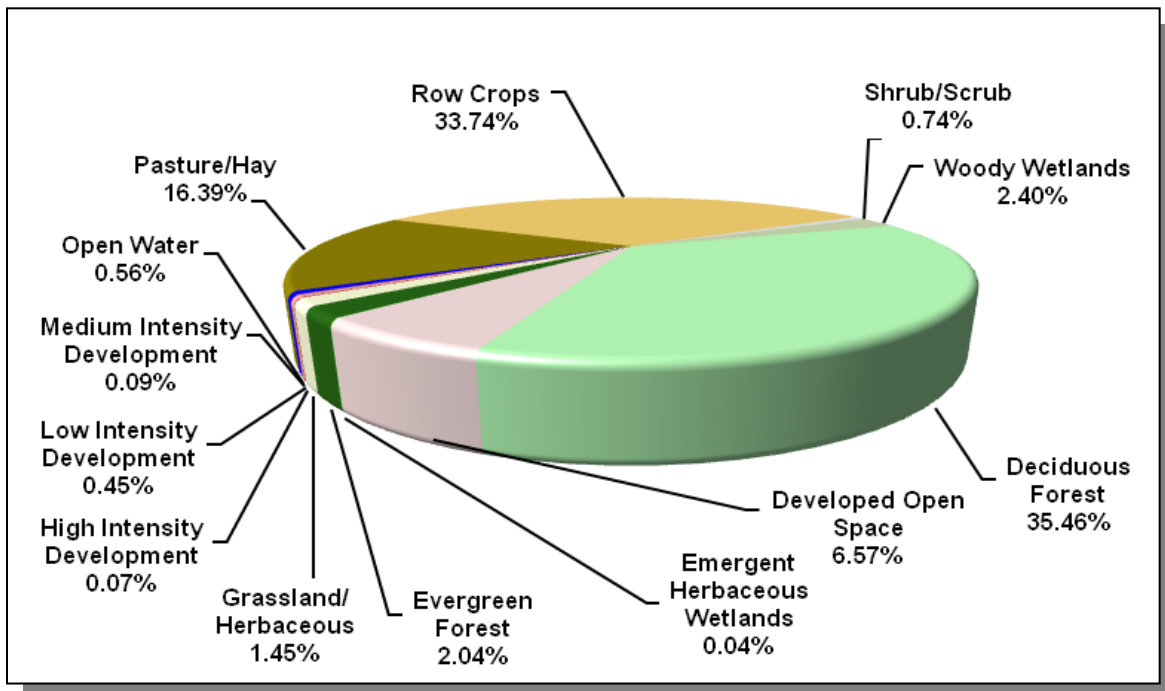
**Figure 4-135. Location of Subwatershed 080102030401.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



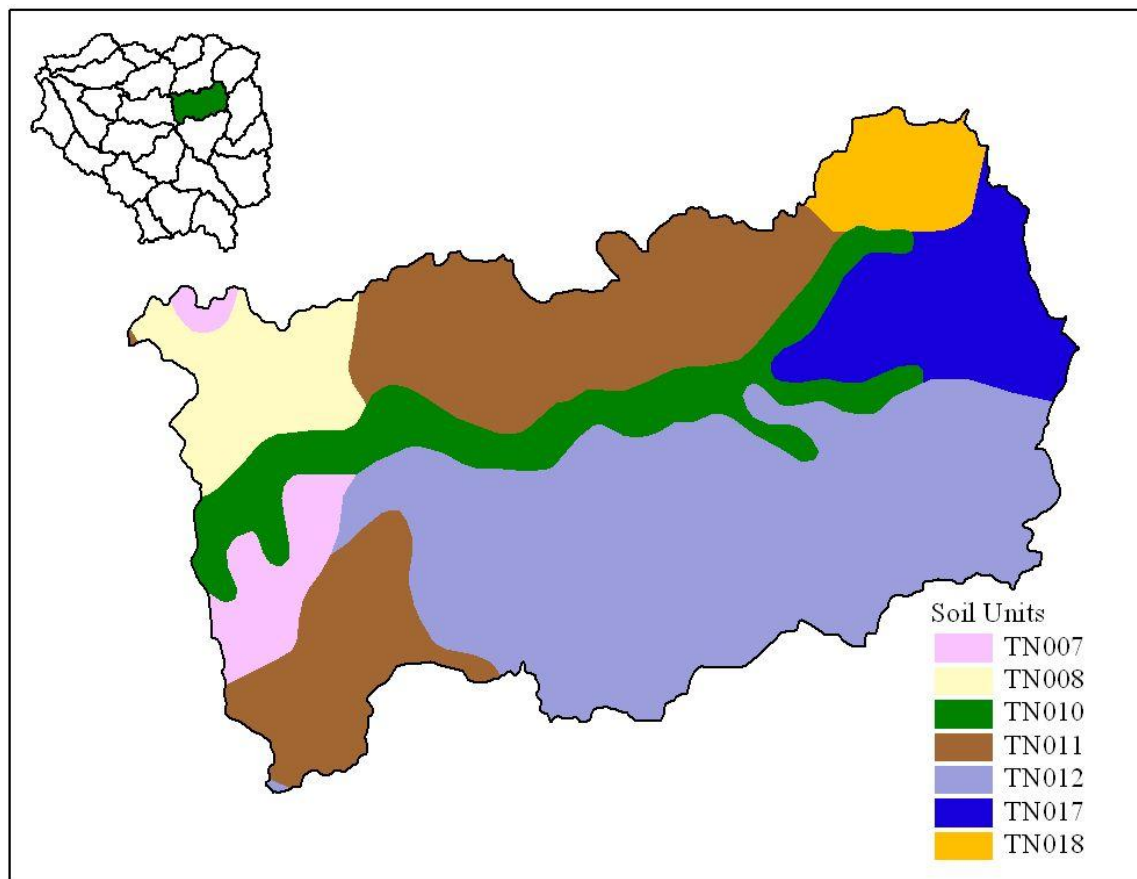
**Figure 4-136. Locational Details of Subwatershed 080102030401.**



**Figure 4-137. Illustration of Land Use Distribution in Subwatershed 080102030401.**



**Figure 4-138. Land Use Distribution in Subwatershed 080102030401.** More information is provided in Appendix IV.



**Figure 4-139. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030401.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40
TN012	1.00	C	2.52	5.13	Silty Loam	0.39
TN017	0.00	B	1.81	5.26	Silty Loam	0.45
TN018	4.00	B	2.62	5.10	Loam	0.38

**Table 4-93. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030401.** The definition of "Hydrologic Group" is provided in Appendix IV.

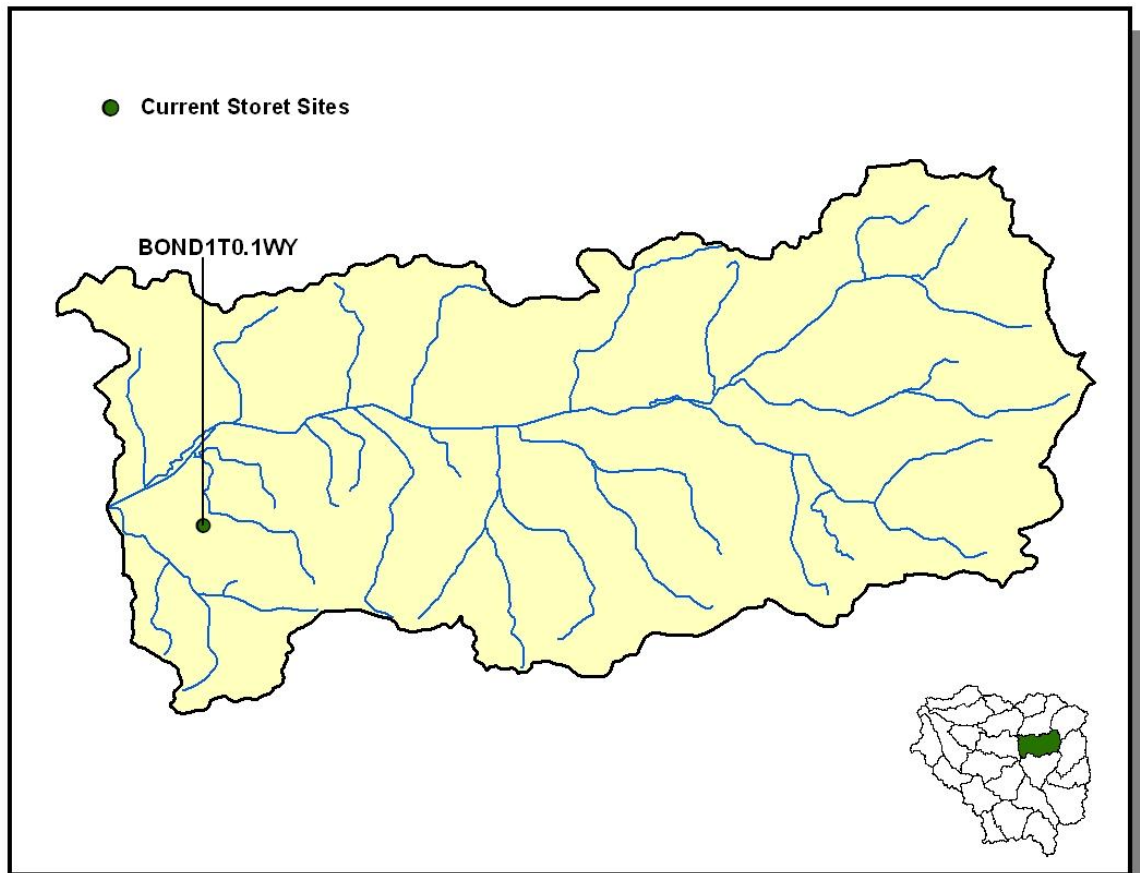
	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	Portion of Watershed (%)	1990	1997	2000	% Change (1990-2000)
Carroll	27,514	28,990	29,475	0.63	172	182	185	7.60
Henry	27,888	29,830	31,115	3.46	964	1,031	1,076	11.60
Weakley	31,972	32,808	34,895	4.36	1,394	1,431	1,522	9.20
<b>Total</b>	<b>87,374</b>	<b>91,628</b>	<b>95,485</b>		<b>2,530</b>	<b>2,644</b>	<b>2,783</b>	<b>10.00</b>

*Table 4-94. Population Estimates in Subwatershed 080102030401.*



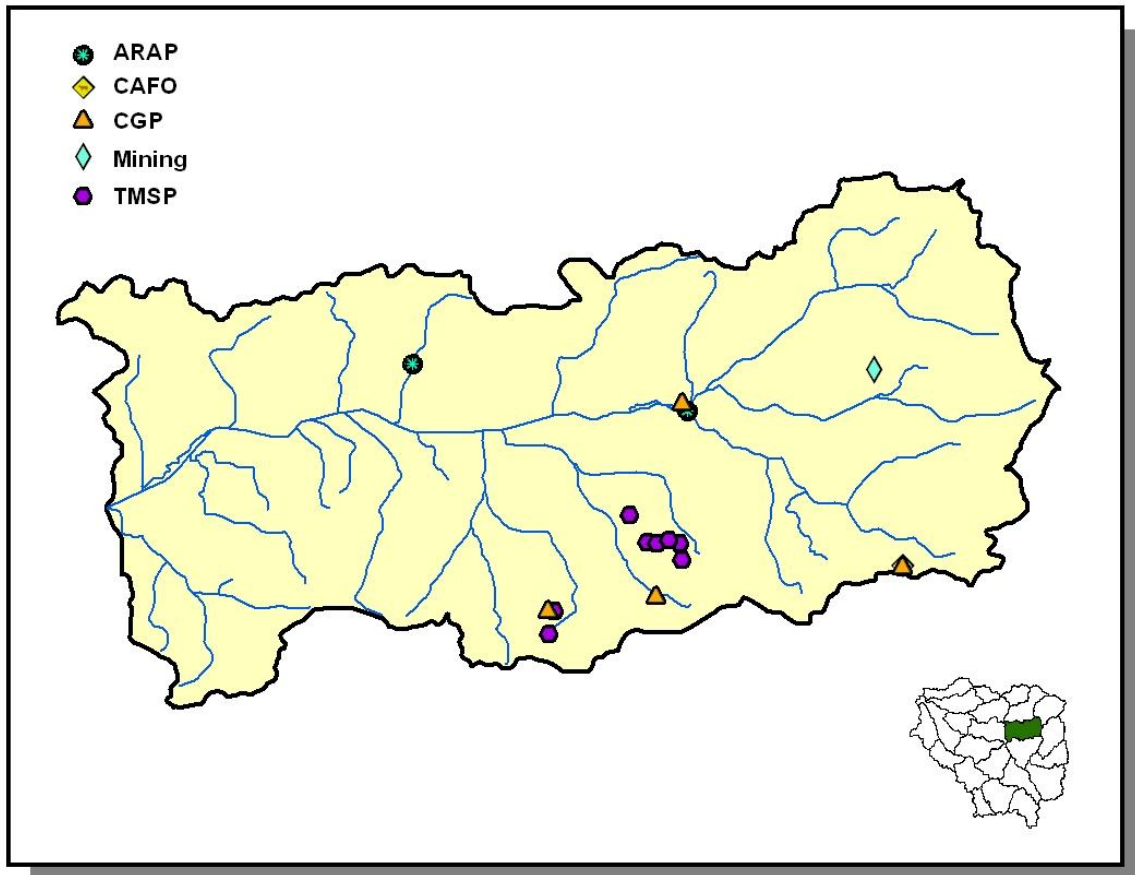
**4.2.N.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations located in subwatershed 080102030401.

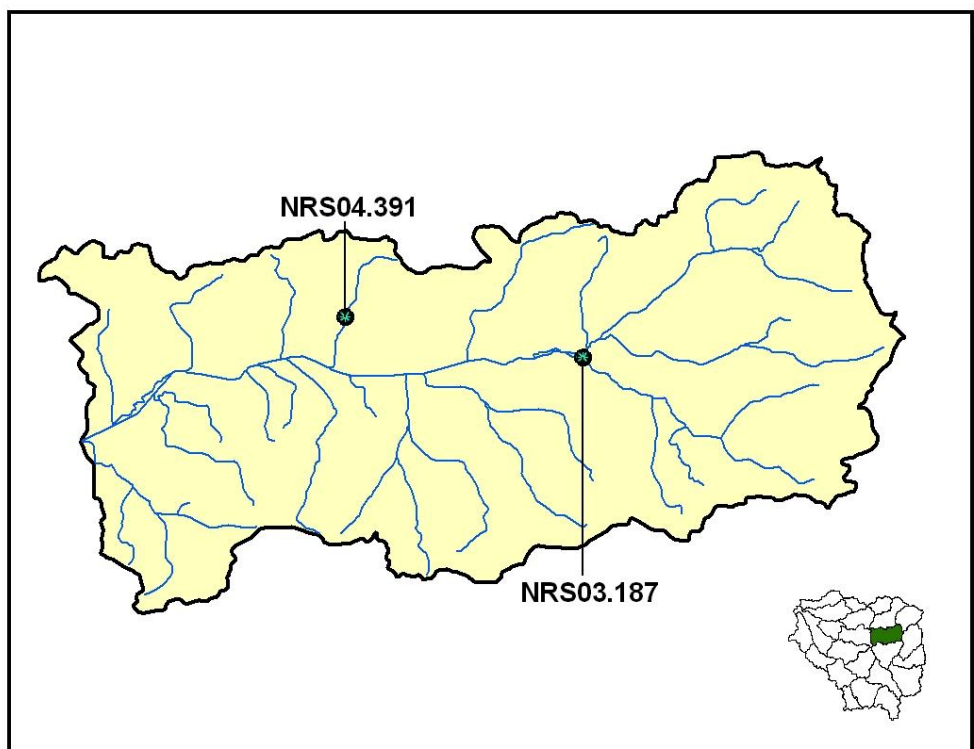


**Figure 4-140. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030401.** More information, including site names and locations, is provided in Appendix IV.

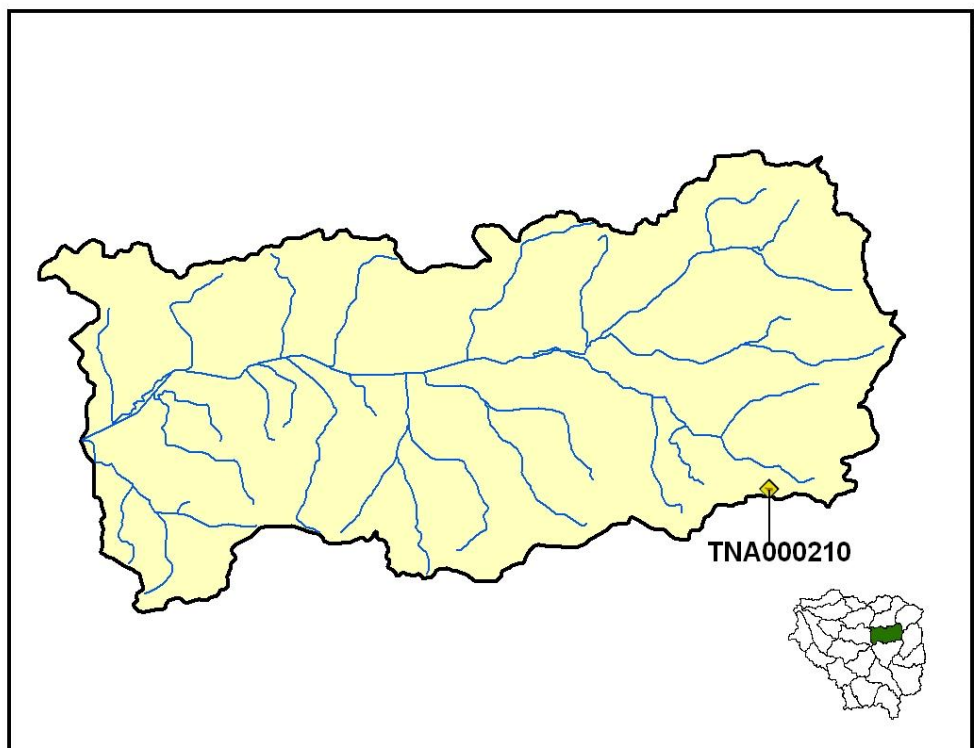
**4.2.N.iii. Permitted Activities.**



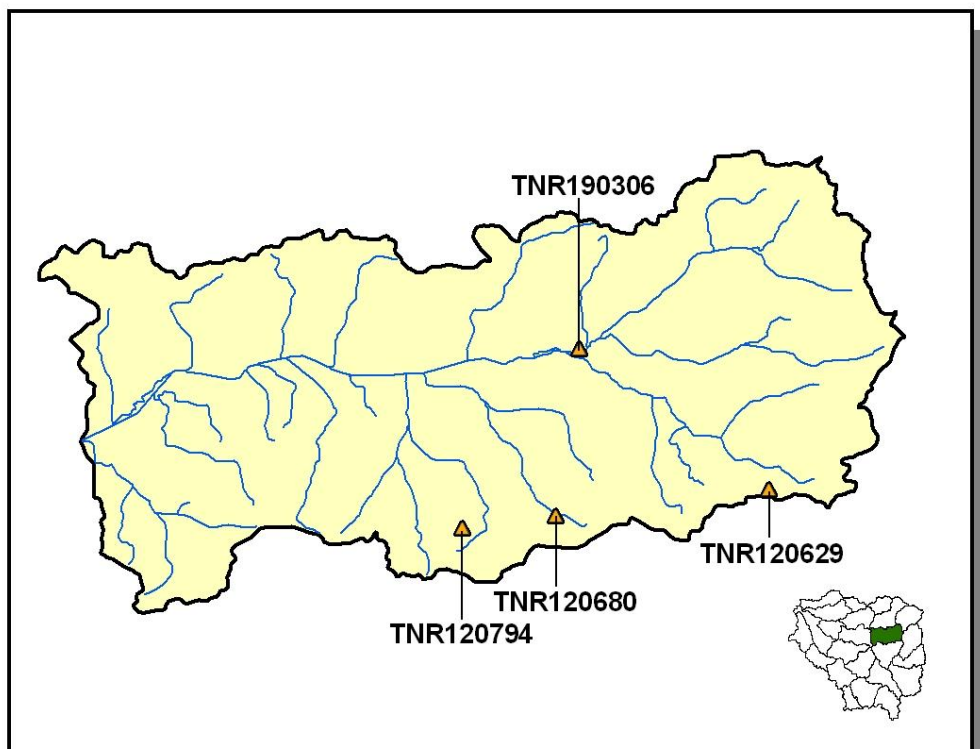
**Figure 4-141. Location of Permits Issued in Subwatershed 080102030401.** More information, including the names of facilities, is provided in Appendix IV.



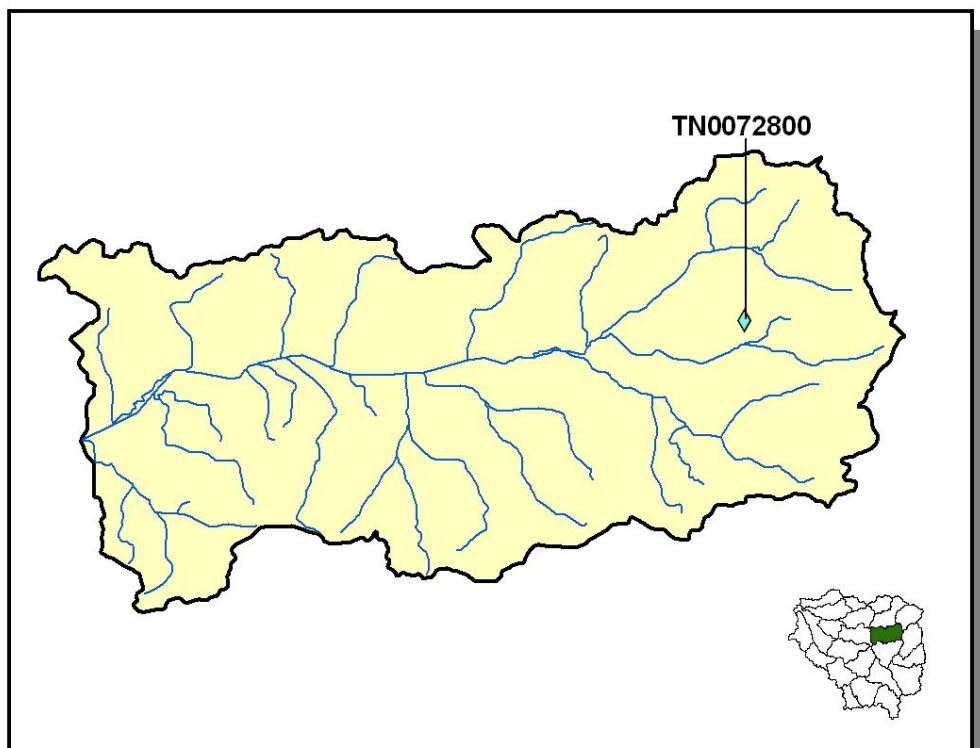
**Figure 4-142. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030401.** More information is provided in Appendix IV.



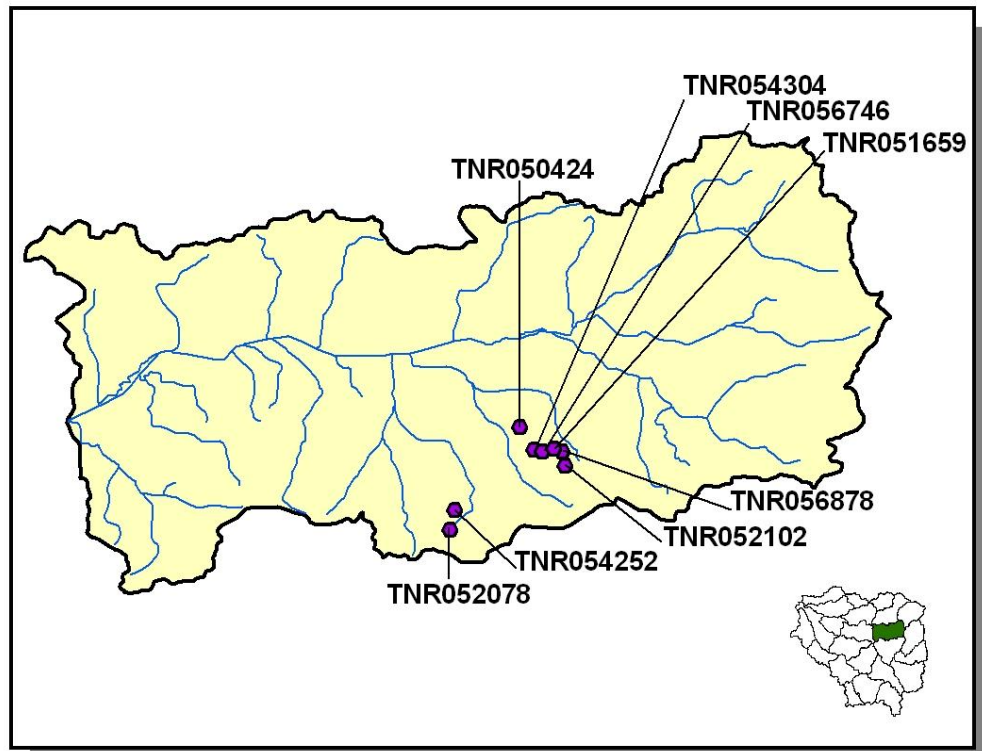
**Figure 4-143. Location of CAFO (Concentrated Animal Feed Operation) Permit Sites in Subwatershed 080102030401.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-144. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030401.** More information is provided in Appendix IV.



**Figure 4-145. Location of Permitted Mining Facilities in Subwatershed 080102030401.** More information is provided in Appendix IV.



**Figure 4-146. Location of TMS (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030401.** More information is provided in Appendix IV.

**4.2.N.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	
Henry	8,920	20,299	1,793	29	36,205	89
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-95. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0
Henry	176.1	176.1	1.9	7.1
Weakley	96.1	95.9	6.7	24.6

**Table 4-96. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

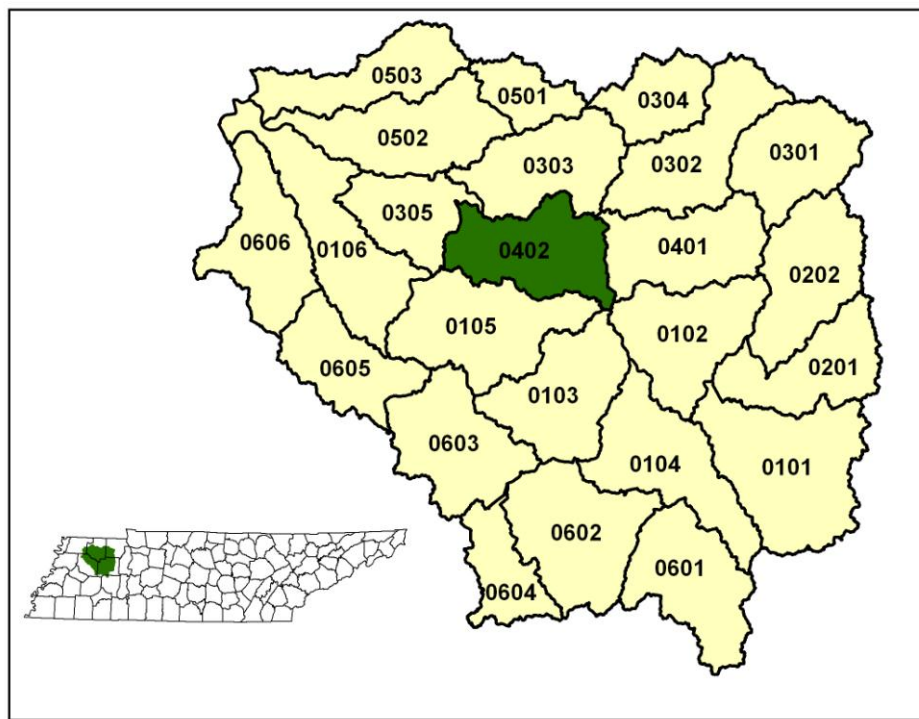
CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Other (Horticultural)	16.41
Wheat (Close Grown Cropland)	9.00
Cotton (Row Crops)	7.58
Corn (Row Crops)	7.51
Soybeans (Row Crops)	7.31
Other Cropland not Planted	4.09
Legume (Pastureland)	1.47
Grass Forbs Legumes Mixed (Pastureland)	0.82
Other Land in Farms	0.59
Conservation Reserve Program Land	0.55
Legume (Hayland)	0.43
Farmsteads and Ranch Headquarters	0.35
Grass (Hayland)	0.24
Grass (Pastureland)	0.20
Legume Grass (Hayland)	0.16

**Table 4-97. Annual Estimated Total Soil Loss in Subwatershed 080102030401.**

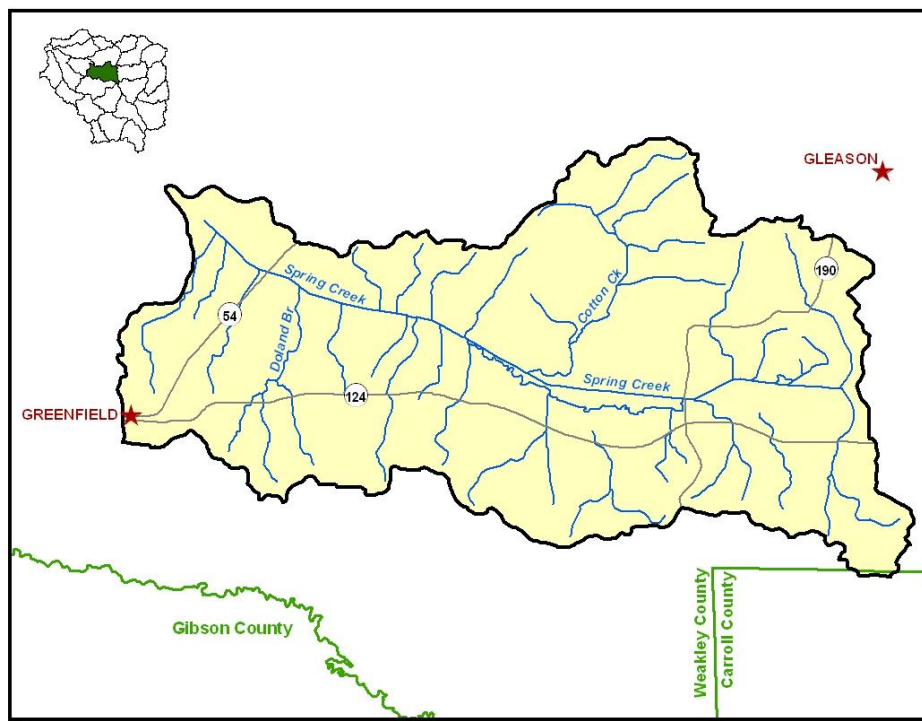


#### 4.2.O. 080102030402 (Spring Creek Lower).

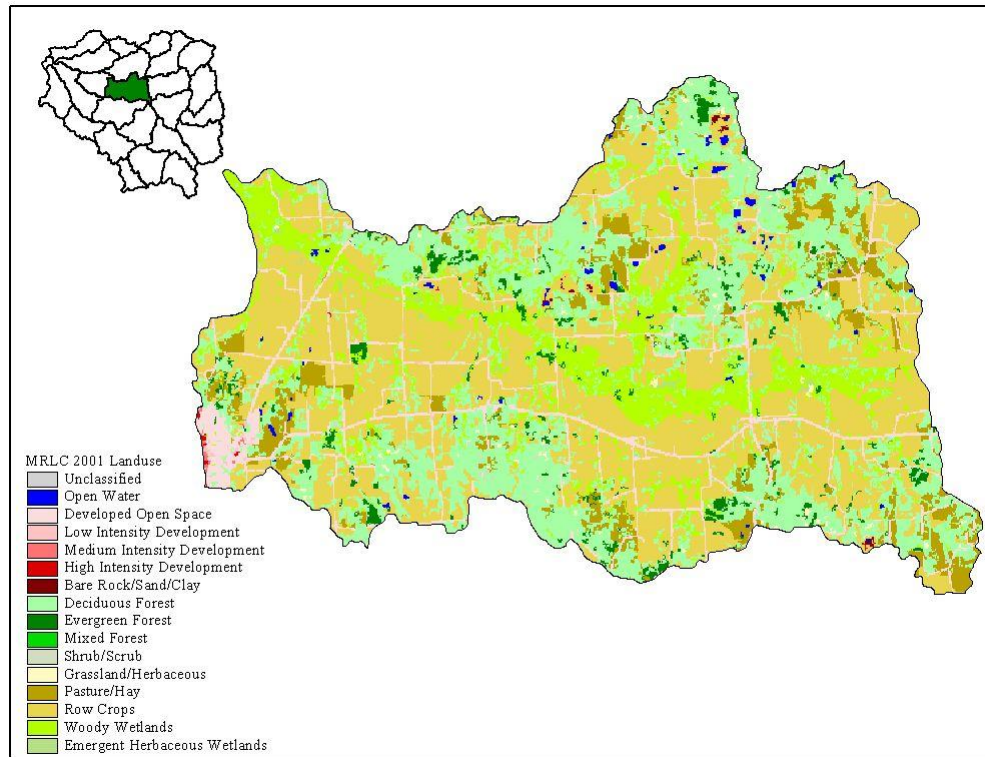
##### 4.2.O.i. General Description.



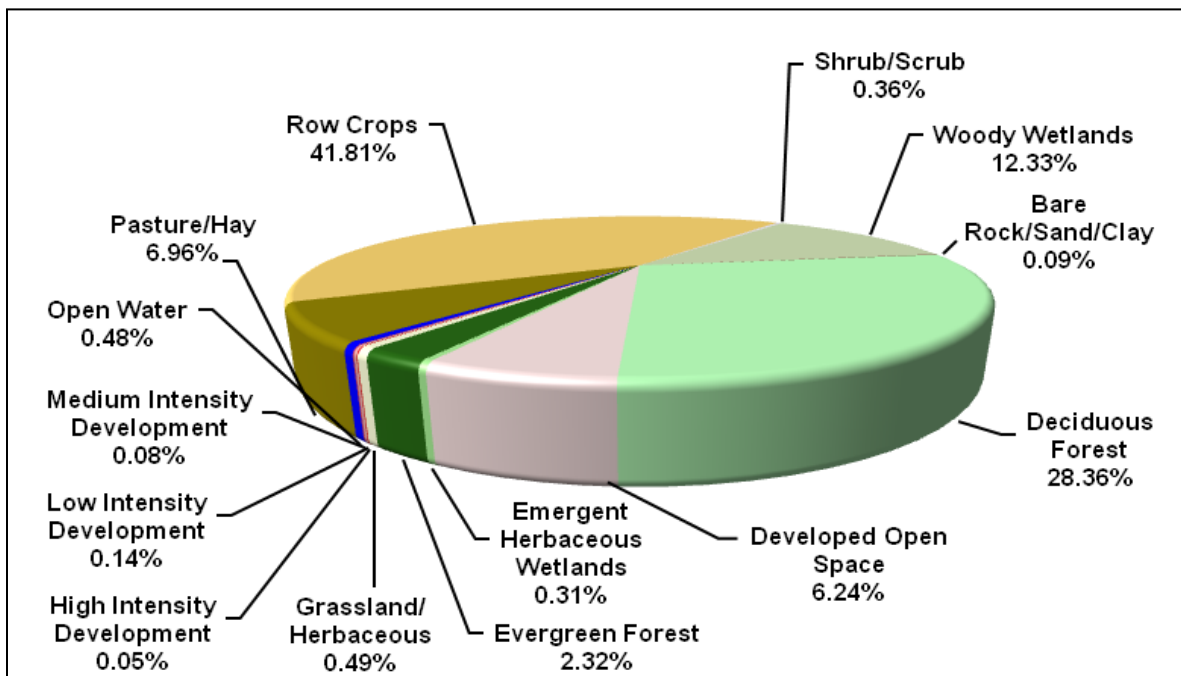
**Figure 4-147. Location of Subwatershed 080102030402.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



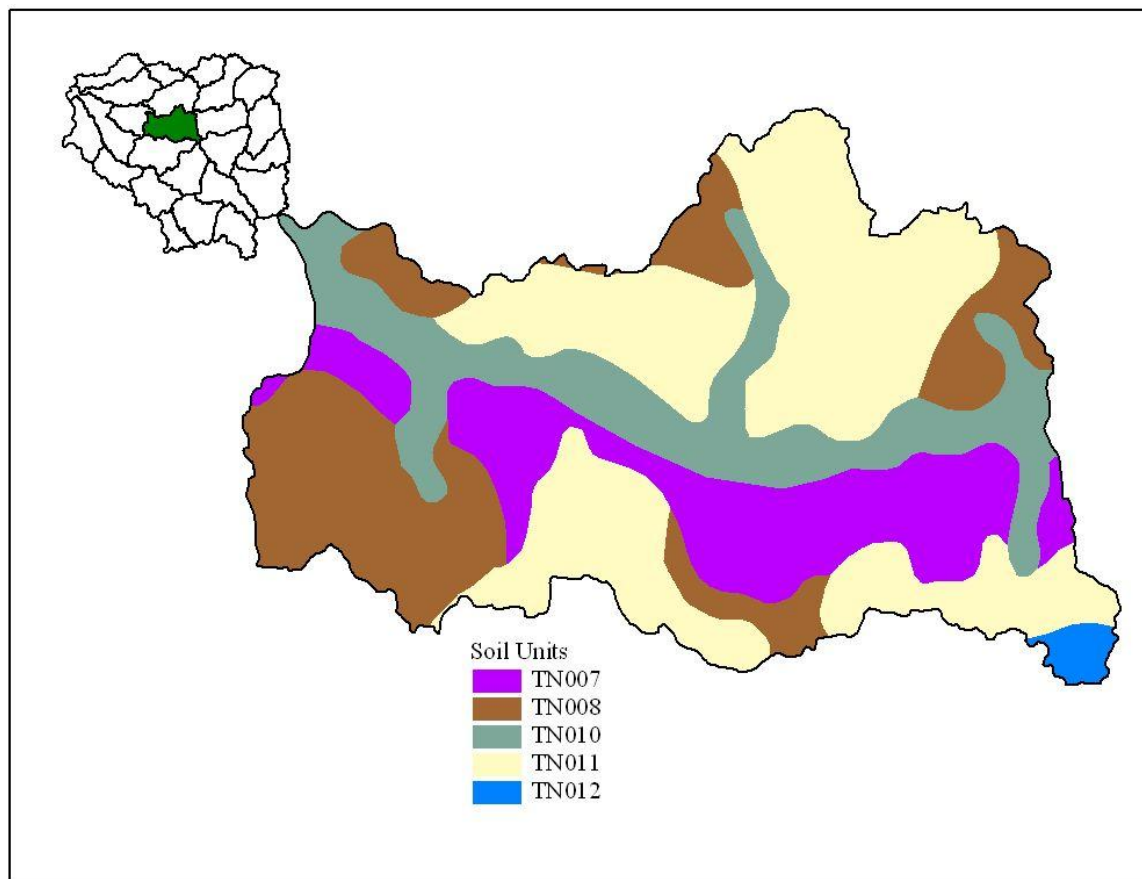
**Figure 4-148. Locational Details of Subwatershed 080102030402.**



**Figure 4-149. Illustration of Land Use Distribution in Subwatershed 080102030402.**



**Figure 4-150. Land Use Distribution in Subwatershed 080102030402.** More information is provided in Appendix IV.



**Figure 4-151. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030402.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40
TN012	1.00	C	2.52	5.13	Silty Loam	0.39

**Table 4-98. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030402.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Weakley	31,972	32,808	34,895	8.63	2,761	2,833	3,013	9.10

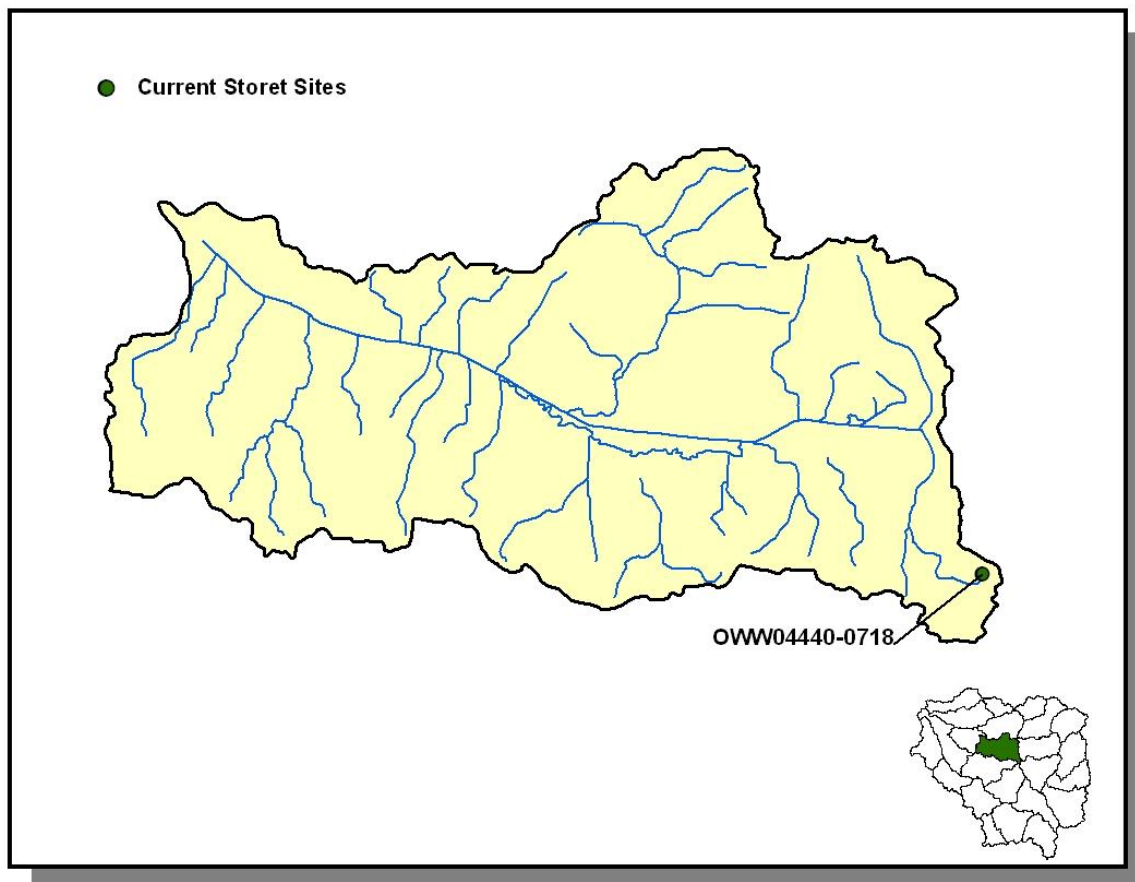
**Table 4-99. Population Estimates in Subwatershed 080102030402.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Greenfield	Weakley	2,105	949	900	46	3

**Table 4-100. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030402.**

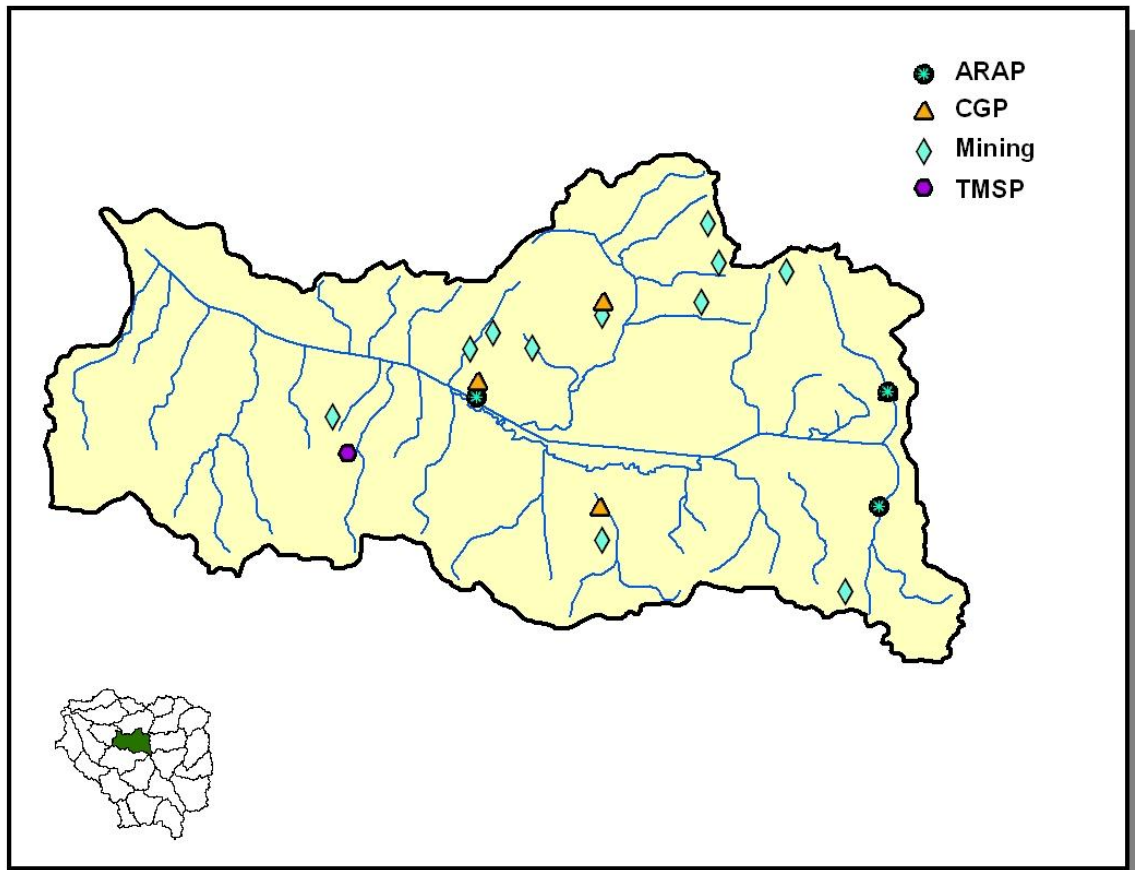
**4.2.O.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations located in subwatershed 080102030402.



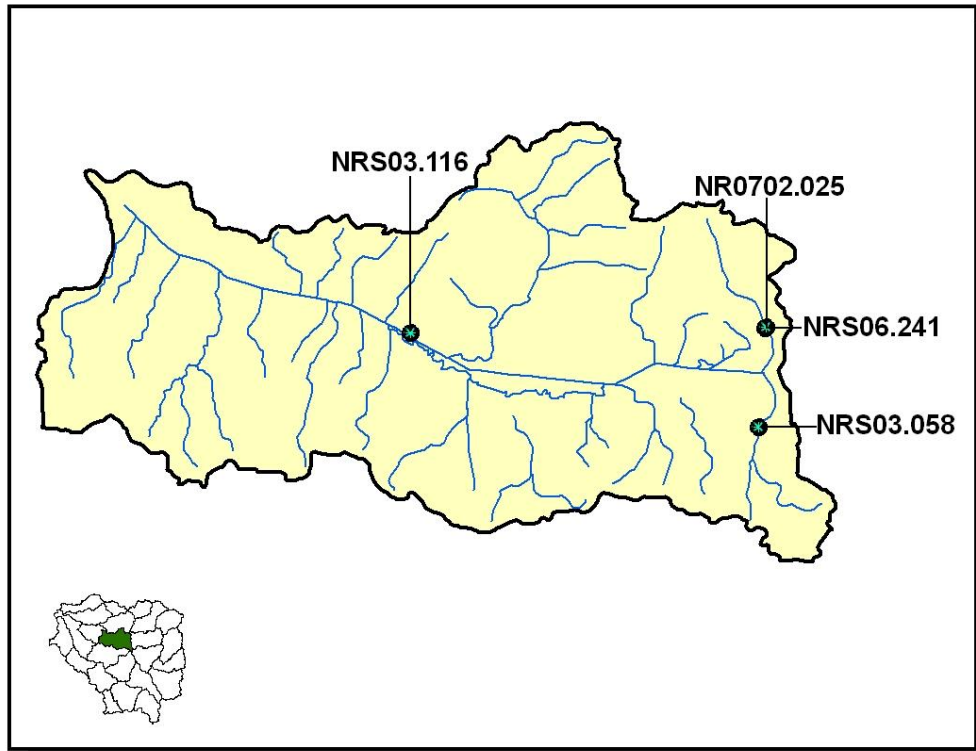
**Figure 4-152. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030402.** More information, including site names and locations, is provided in Appendix IV.

**4.2.O.iii. Permitted Activities.**

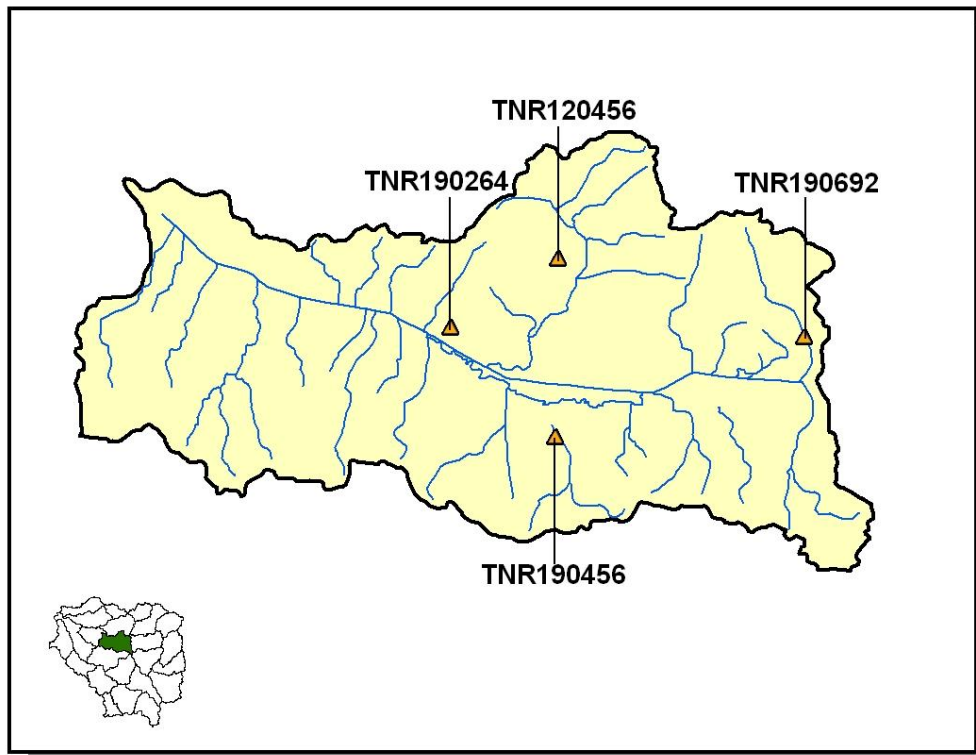


**Figure 4-153. Location of Permits Issued in Subwatershed 080102030402.** More information, including the names of facilities, is provided in Appendix IV.

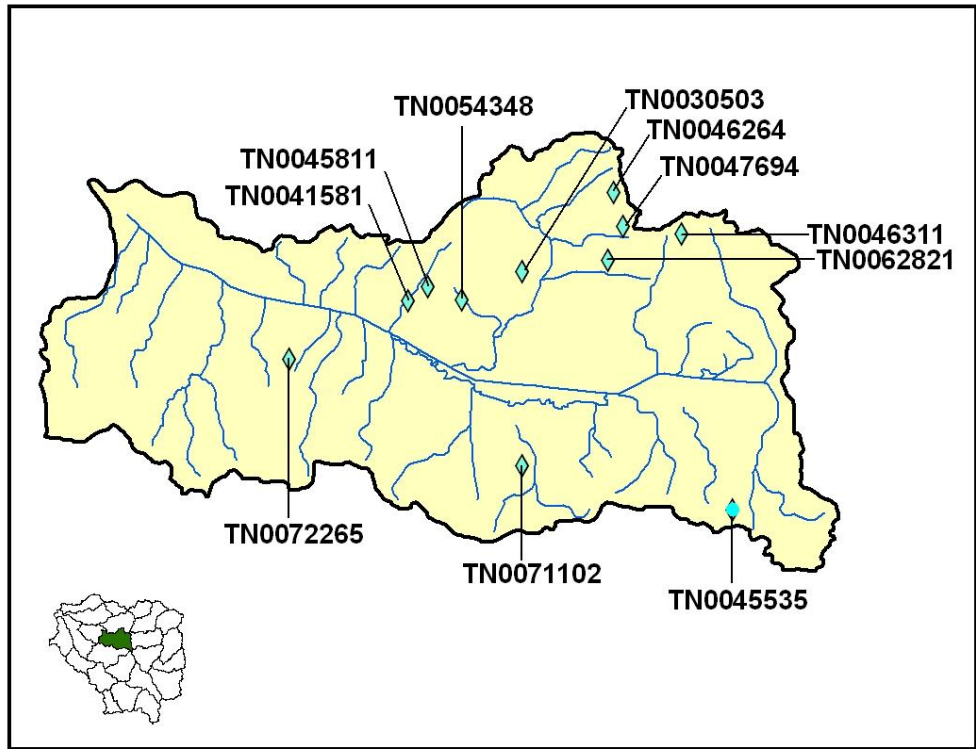




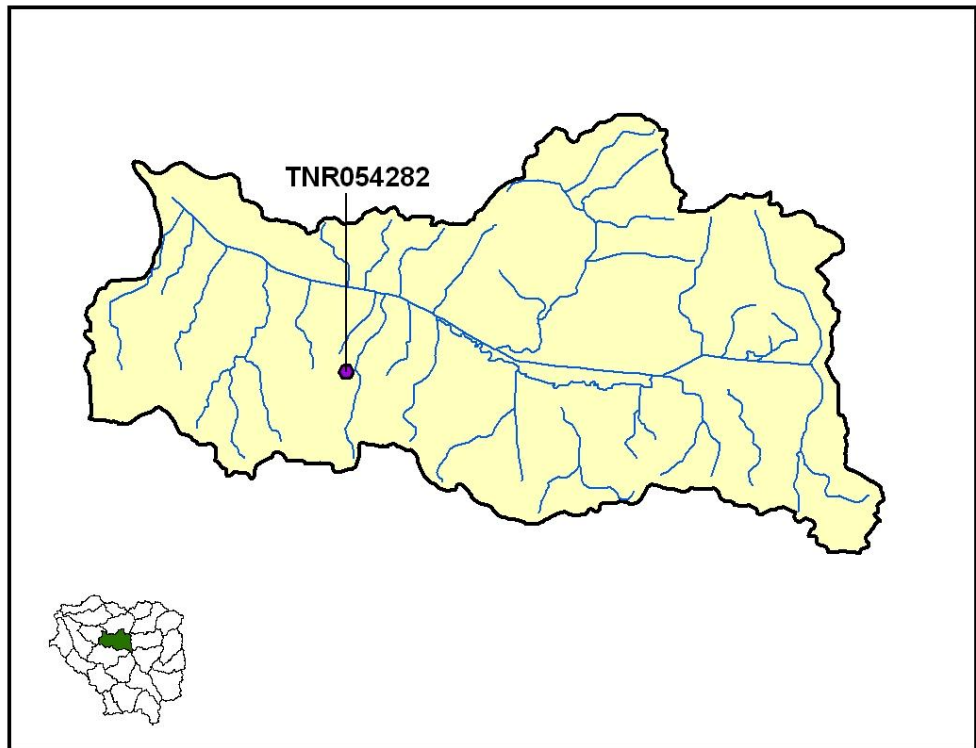
**Figure 4-154. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030402.** More information is provided in Appendix IV.



**Figure 4-155. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030402.** More information is provided in Appendix IV.



**Figure 4-156. Location of Permitted Mining Facilities in Subwatershed 080102030402.** More information is provided in Appendix IV.



**Figure 4-157. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030402.** More information is provided in Appendix IV.

**4.2.O.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-101. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Weakley	96.1	95.9	6.7	24.6

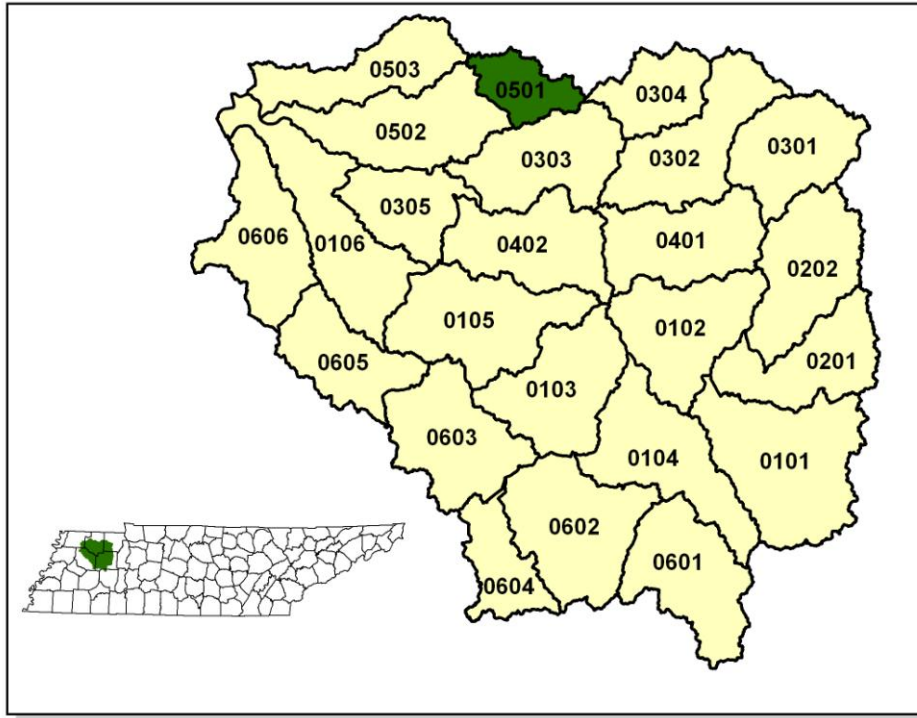
**Table 4-102. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Wheat (Close Grown Cropland)	10.03
Soybeans (Row Crops)	7.64
Cotton (Row Crops)	7.58
Corn (Row Crops)	7.56
Other Cropland not Planted	4.51
Legume (Pastureland)	1.47
Grass Forbs Legumes Mixed (Pastureland)	1.11
Other Land in Farms	0.59
Legume (Hayland)	0.49
Legume Grass (Hayland)	0.46
Farmsteads and Ranch Headquarters	0.44
Conservation Reserve Program Land	0.43
Grass (Hayland)	0.23
Grass (Pastureland)	0.13

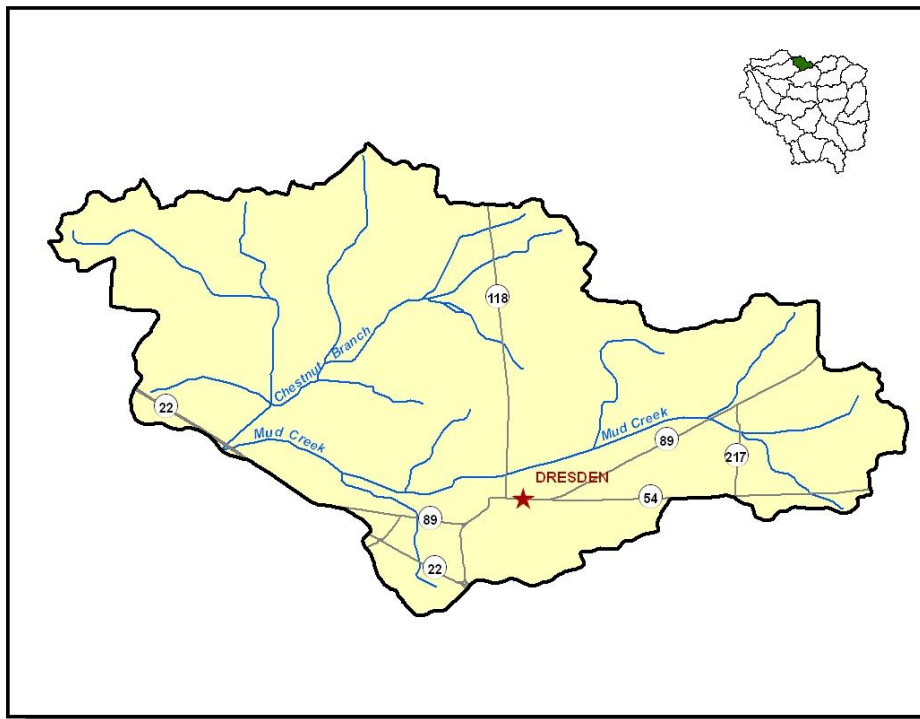
**Table 4-103. Annual Estimated Total Soil Loss in Subwatershed 080102030402.**

**4.2.P. 080102030501 (Mud Creek, Upper).**

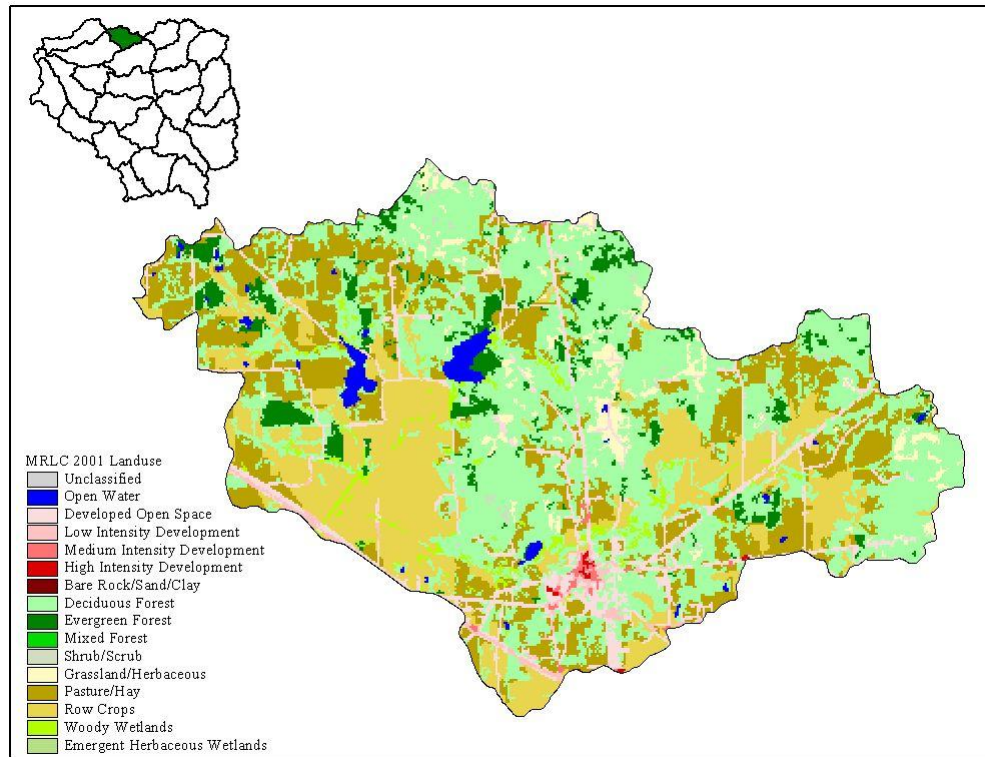
**4.2.P.i. General Description.**



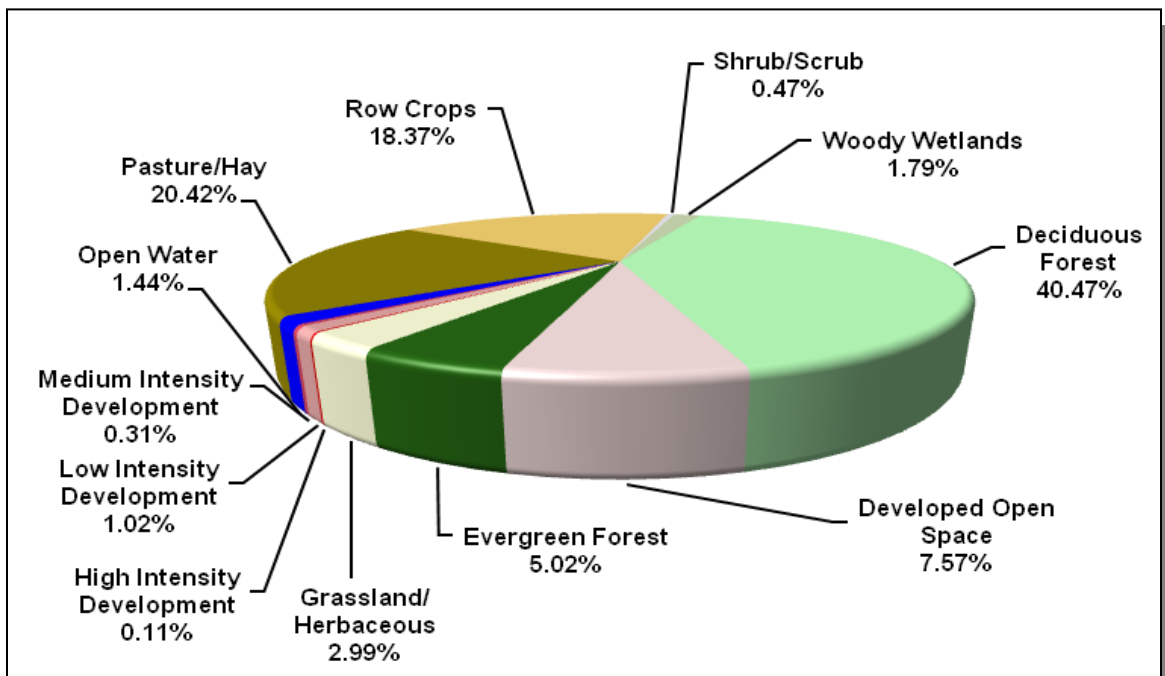
**Figure 4-158. Location of Subwatershed 080102030501.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



**Figure 4-159. Locational Details of Subwatershed 080102030501.**

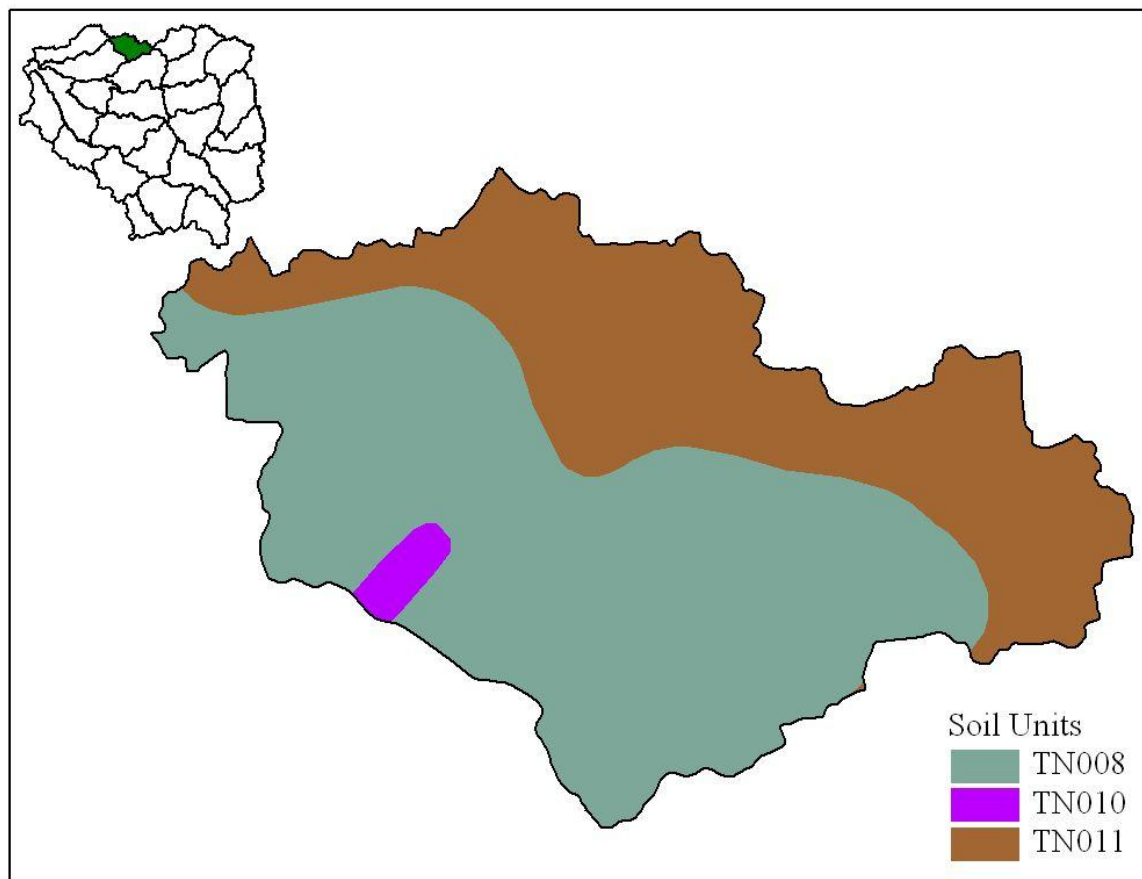


**Figure 4-160. Illustration of Land Use Distribution in Subwatershed 080102030501.**



**Figure 4-161. Land Use Distribution in Subwatershed 080102030501.** More information is provided in Appendix IV.





**Figure 4-162. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030501.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN011	0.00	B	2.27	5.18	Silty Loam	0.40

**Table 4-104. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030501.** The definition of "Hydrologic Group" is provided in Appendix IV.



County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Weakley	31,972	32,808	34,895	3.57	1,141	1,171	1,245	9.10

**Table 4-105. Population Estimates in Subwatershed 080102030501.**

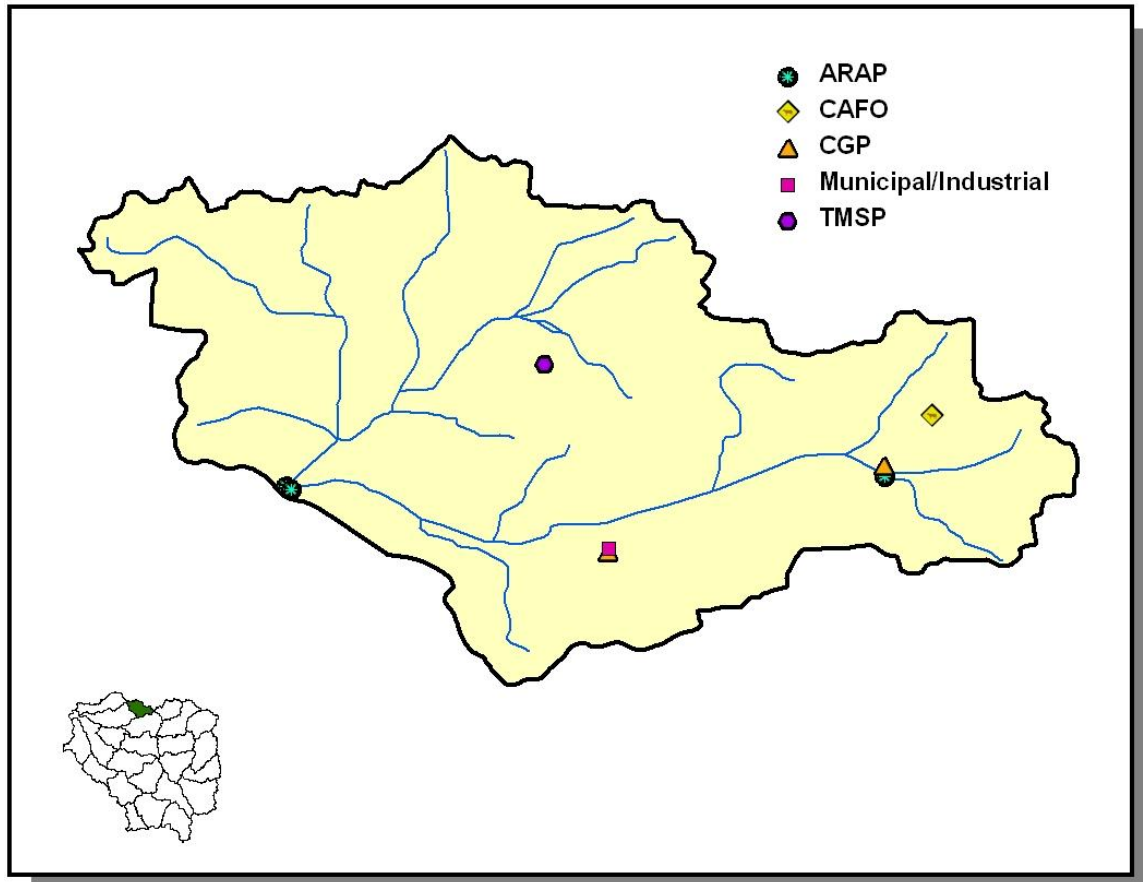
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Dresden	Weakley	2,488	1,102	1,001	99	2

**Table 4-106. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030501.**

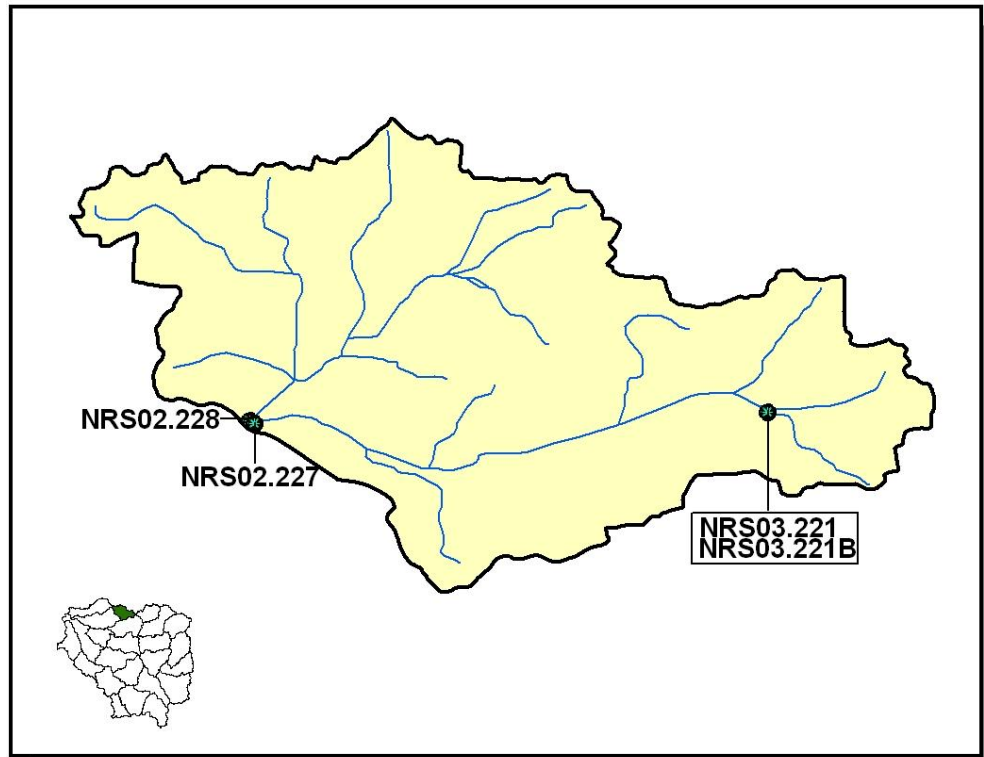
#### **4.2.P.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations or STORET sites located in subwatershed 080102030501.

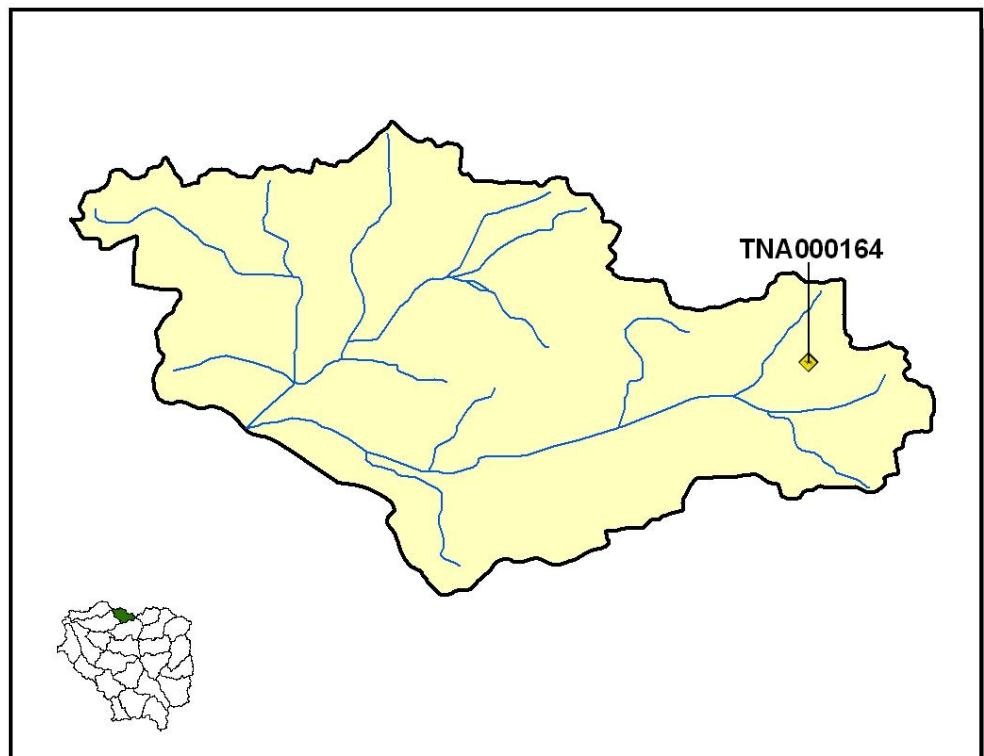
#### **4.2.P.iii. Permitted Activities.**



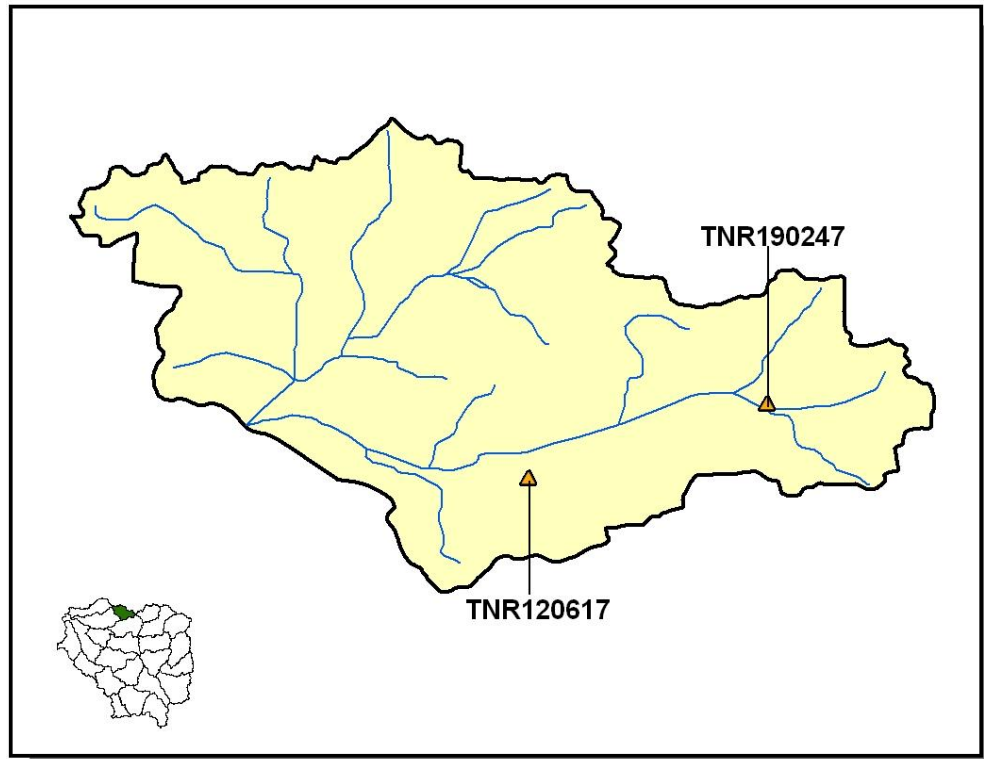
**Figure 4-163. Location of Permits Issued in Subwatershed 080102030501.** More information, including the names of facilities, is provided in Appendix IV.



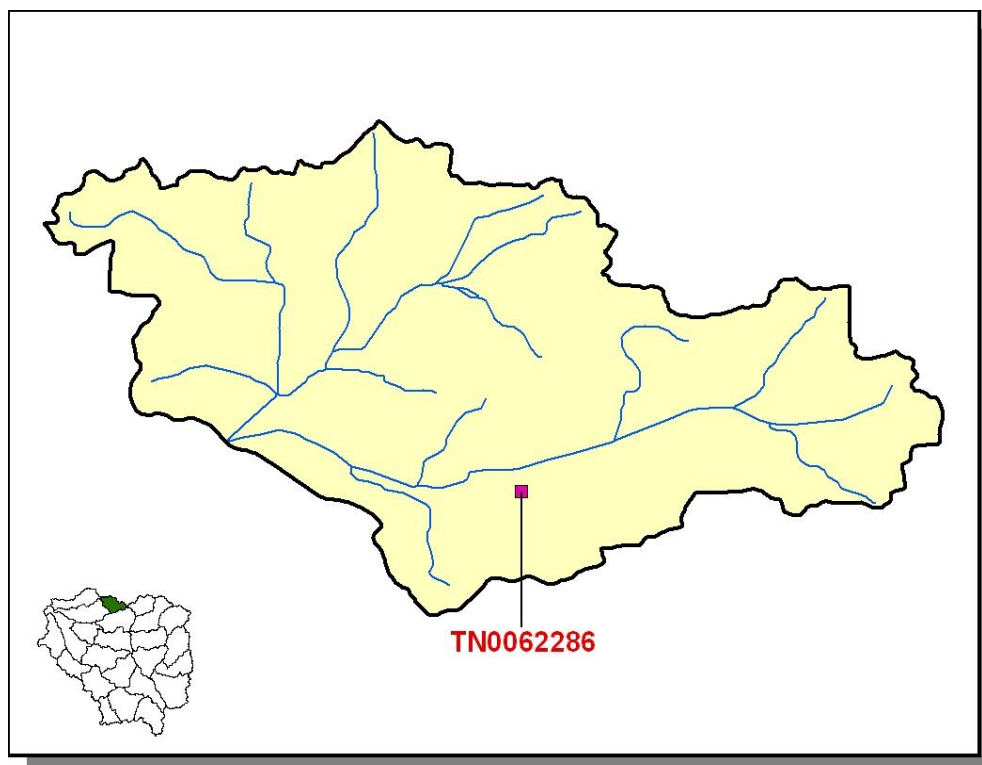
**Figure 4-164. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030501.** More information is provided in Appendix IV.



**Figure 4-165. Location of CAFO (Concentrated Animal Feed Operation) Permit Sites in Subwatershed 080102030501.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-166. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030501.** More information is provided in Appendix IV.



**Figure 4-167. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030501.** Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the name of the facility is provided in Appendix IV.

PERMIT #	7Q10	DISCHARGE FLOW
TN0062286	30.8	0.589

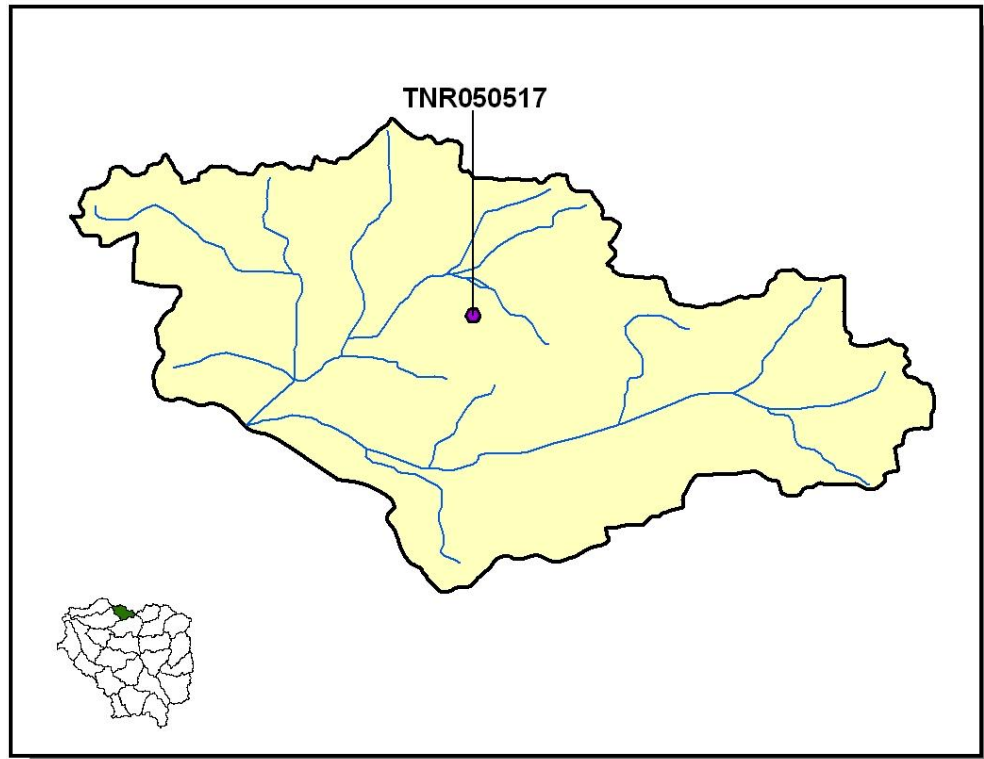
**Table 4-107. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030501.** Data are in million gallons per day (MGD). Data were obtained from permit files.

PERMIT #	BOD <sub>5</sub>	BOD % REMOVAL	AMMONIA AS N (TOTAL)	TKN	PHOSPHORUS TOTAL	NITRITE + NITRATE TOTAL	E. coli
TN0062286	X	X	X	X	X	X	X

**Table 4-108. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030501.** BOD<sub>5</sub>, Biochemical Oxygen Demand (5-day); TKN, Total Kjeldahl Nitrogen.

PERMIT #	DO	TRC	FLOW	pH	TSS	SS
TN0062286	X	X	X	X	X	X

**Table 4-109. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030501.** DO, Dissolved Oxygen; TRC, Total Residual Chlorine; TSS, Total Suspended Solids; SS, Settleable Solids.



**Figure 4-168. Location of TMSPT (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030501.** More information is provided in Appendix IV.



**4.2.P.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-110. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Weakley	96.1	95.9	6.7	24.6

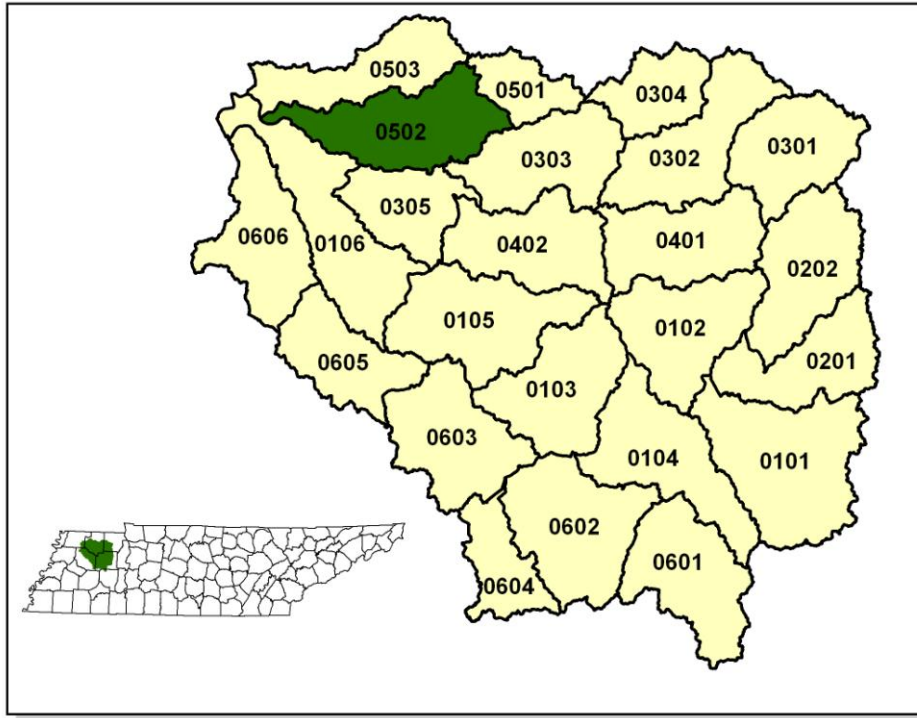
**Table 4-111. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Wheat (Close Grown Cropland)	10.01
Soybeans (Row Crops)	7.63
Corn (Row Crops)	7.56
Other Cropland not Planted	4.50
Legume (Pastureland)	1.47
Grass Forbs Legumes Mixed (Pastureland)	1.11
Legume (Hayland)	0.49
Farmsteads and Ranch Headquarters	0.44
Conservation Reserve Program Land	0.43
Grass (Hayland)	0.23
Grass (Pastureland)	0.13

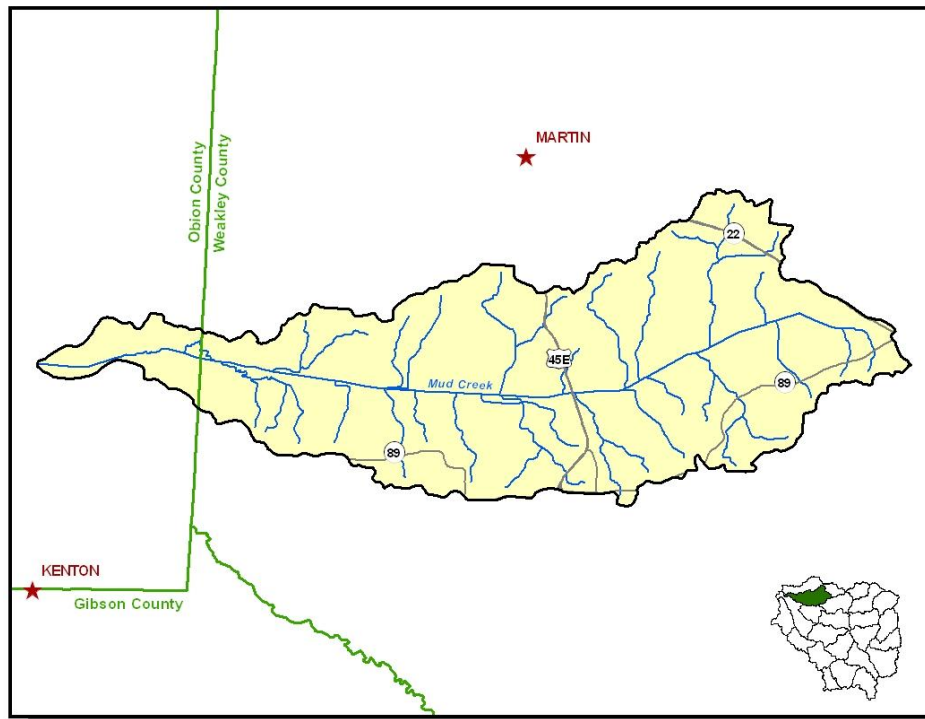
**Table 4-112. Annual Estimated Total Soil Loss in Subwatershed 080102030501.**

**4.2.Q. 080102030502 (Mud Creek, Lower).**

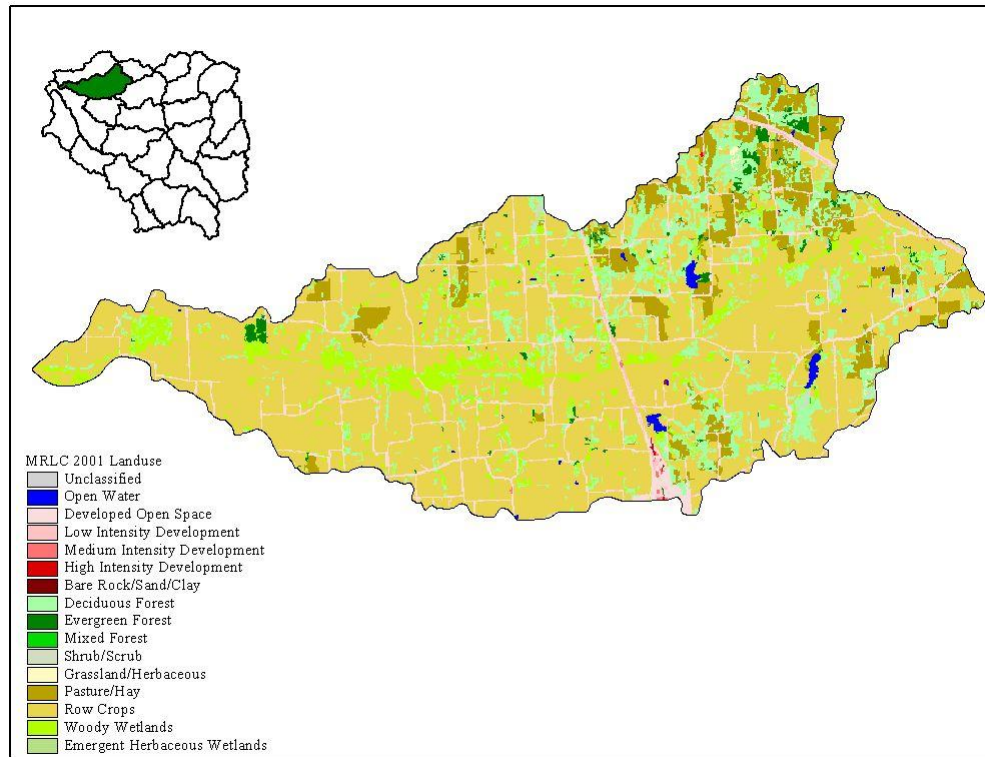
**4.2.Q.i. General Description.**



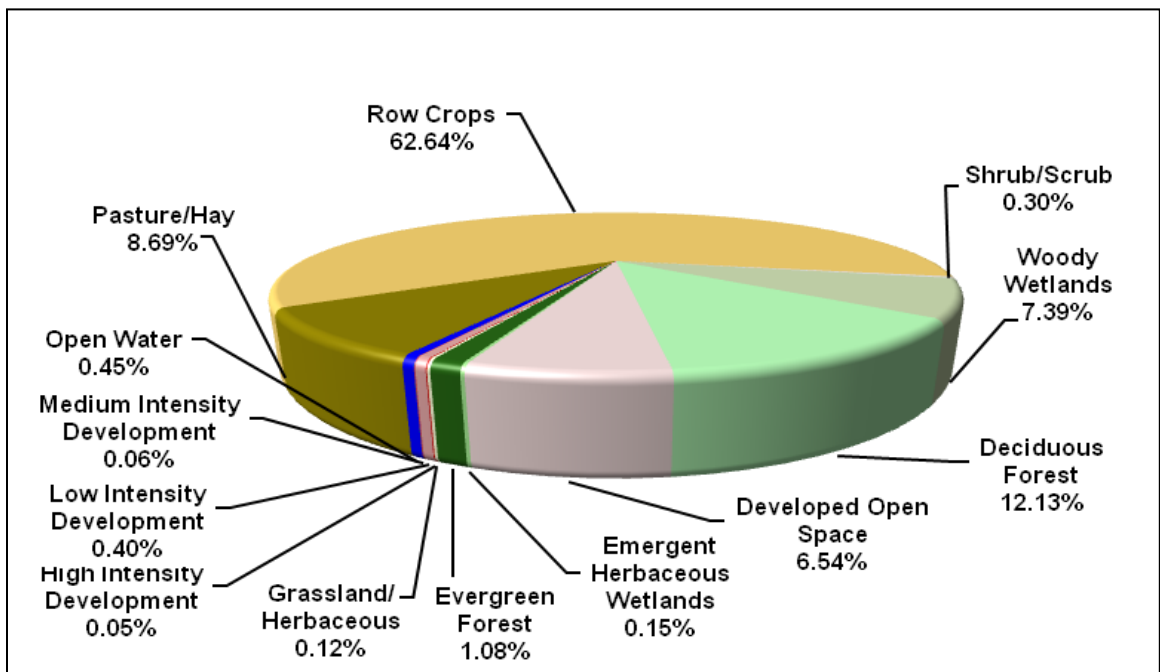
**Figure 4-169. Location of Subwatershed 080102030502.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



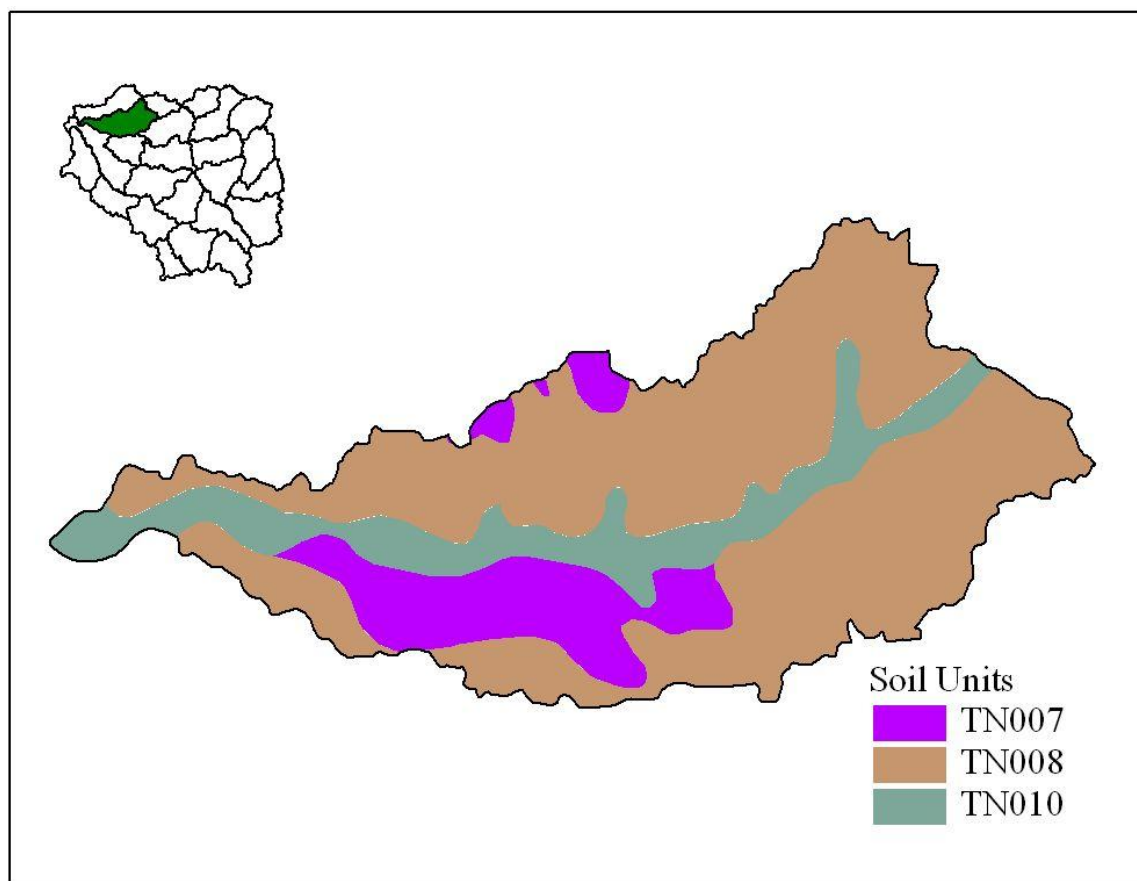
**Figure 4-170. Locational Details of Subwatershed 080102030502.**



**Figure 4-171. Illustration of Land Use Distribution in Subwatershed 080102030502.**



**Figure 4-172. Land Use Distribution in Subwatershed 080102030502.** More information is provided in Appendix IV.



**Figure 4-173. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030502.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44

**Table 4-113. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030502.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Obion	31,717	32,069	32,450	0.58	185	187	190	2.70
Weakley	31,972	32,808	34,895	8.97	2,867	2,942	3,129	9.10
<b>Total</b>	<b>63,689</b>	<b>64,877</b>	<b>67,345</b>		<b>3,052</b>	<b>3,129</b>	<b>3,319</b>	<b>8.70</b>

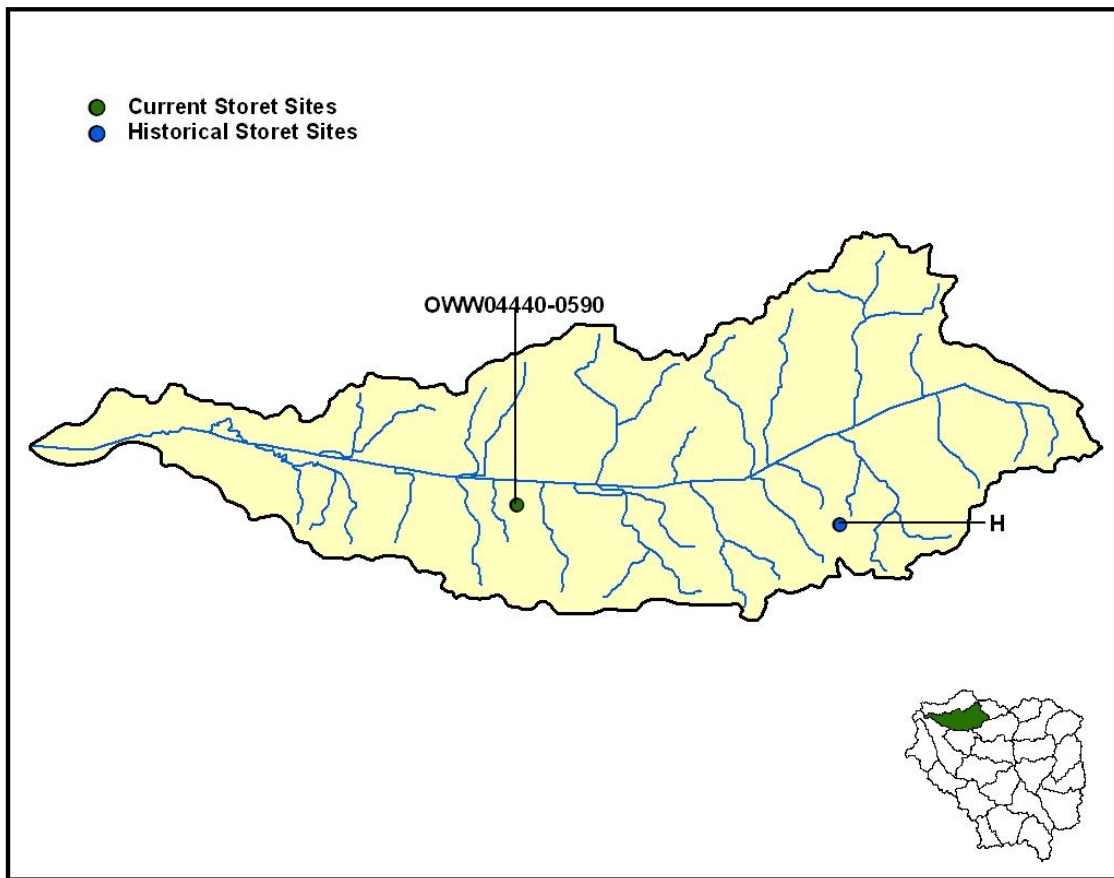
**Table 4-114. Population Estimates in Subwatershed 080102030502.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Dresden	Weakley	2488	1102	1001	99	2
Sharon	Weakley	1047	493	473	20	0

**Table 4-115. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030502.**

**4.2.Q.ii. USGS Gaging Stations and STORET Sites.**

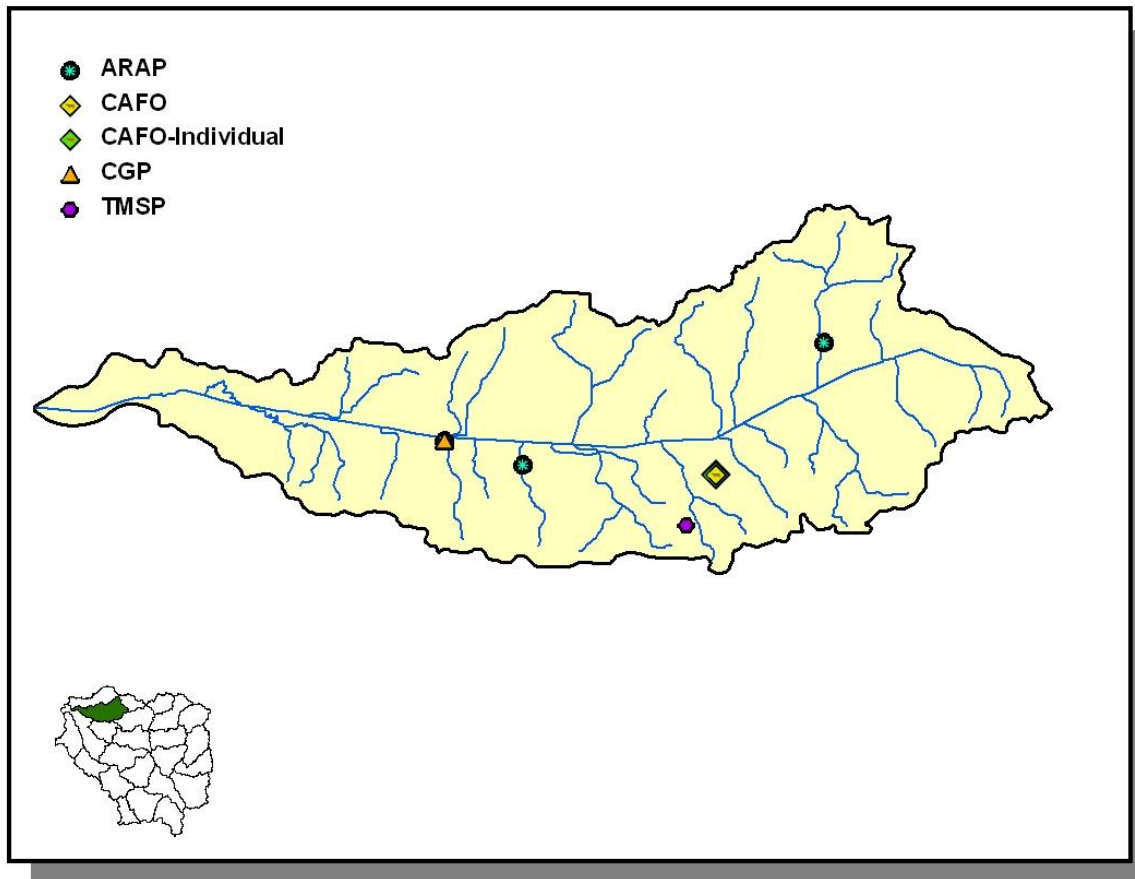
There are no USGS continuous record gaging stations located in subwatershed 080102030502.



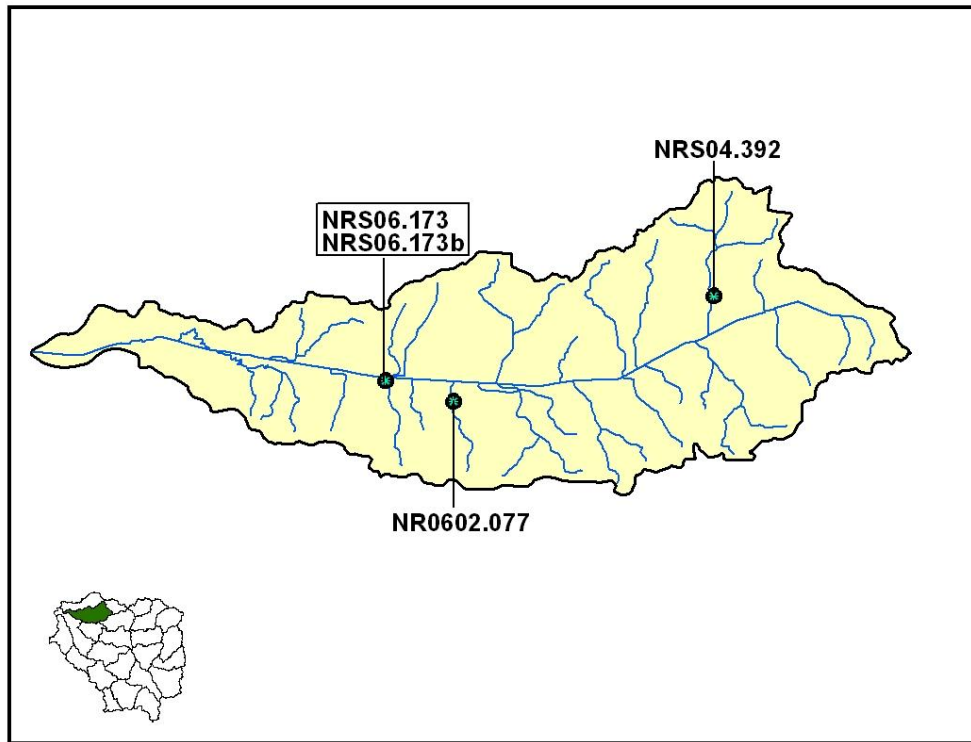
**Figure 4-174. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030502.** More information, including site names and locations, is provided in Appendix IV.



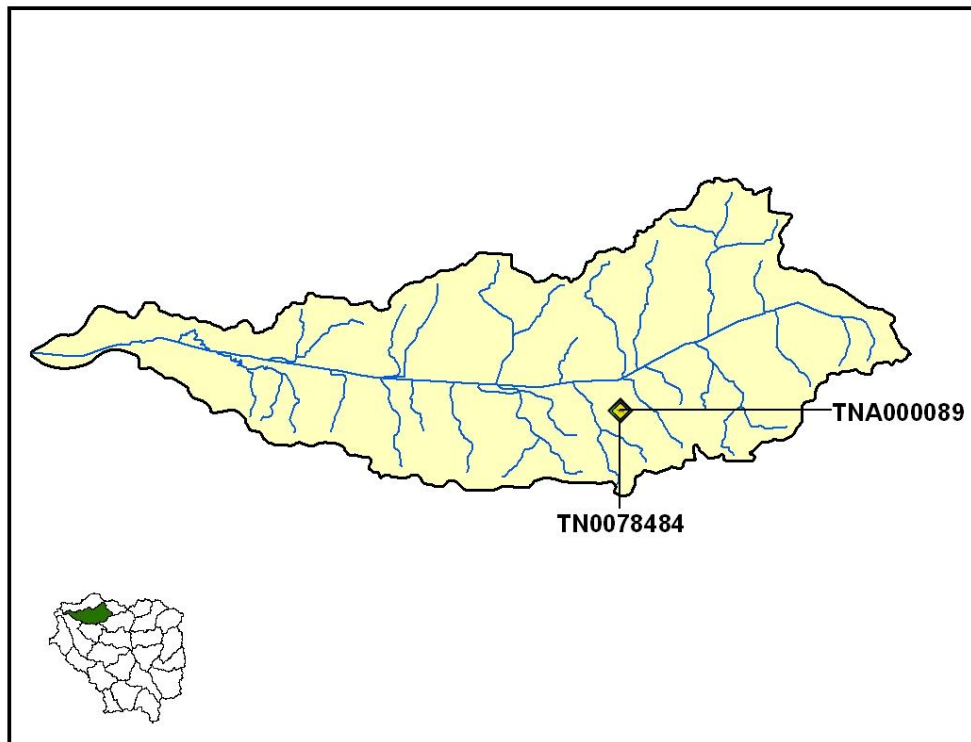
**4.2.Q.iii. Permitted Activities.**



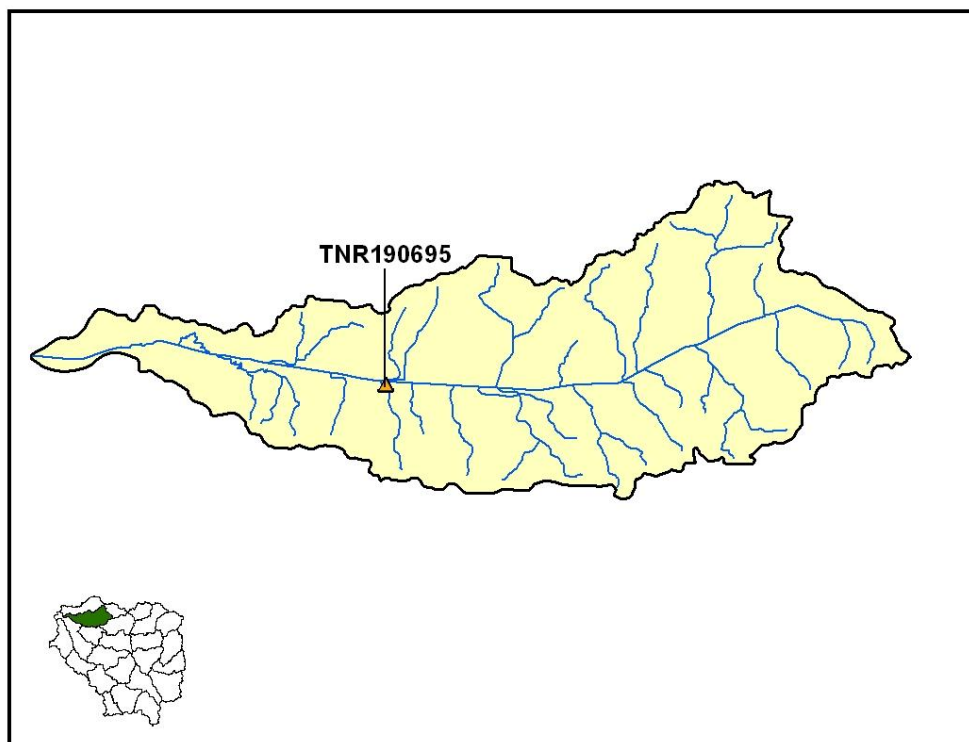
**Figure 4-175. Location of Permits Issued in Subwatershed 080102030502.** More information, including the names of facilities, is provided in Appendix IV.



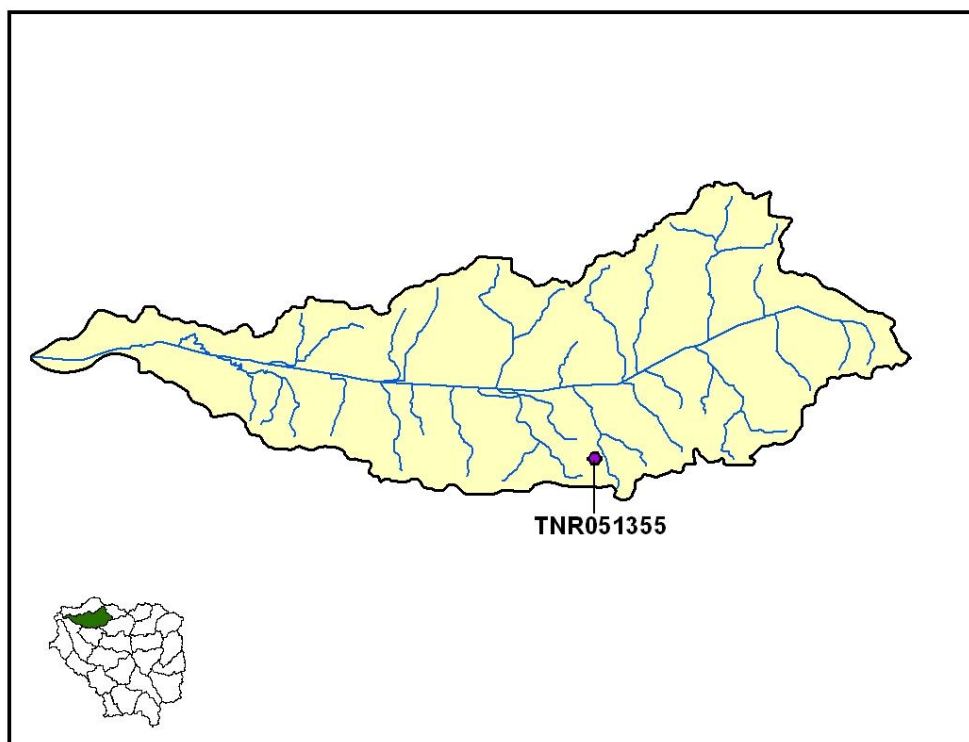
**Figure 4-176. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030502.** More information is provided in Appendix IV.



**Figure 4-177. Location of CAFO (Concentrated Animal Feed Operation) Permit Sites in Subwatershed 080102030502.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-178. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030502.** More information is provided in Appendix IV.



**Figure 4-179. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030502.** More information is provided in Appendix IV.

**4.2.Q.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Obion	8,033	18,503	118	7	21,149	205
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-116. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Obion	67.6	67.6	4.4	20.8
Weakley	96.1	95.9	6.7	24.6

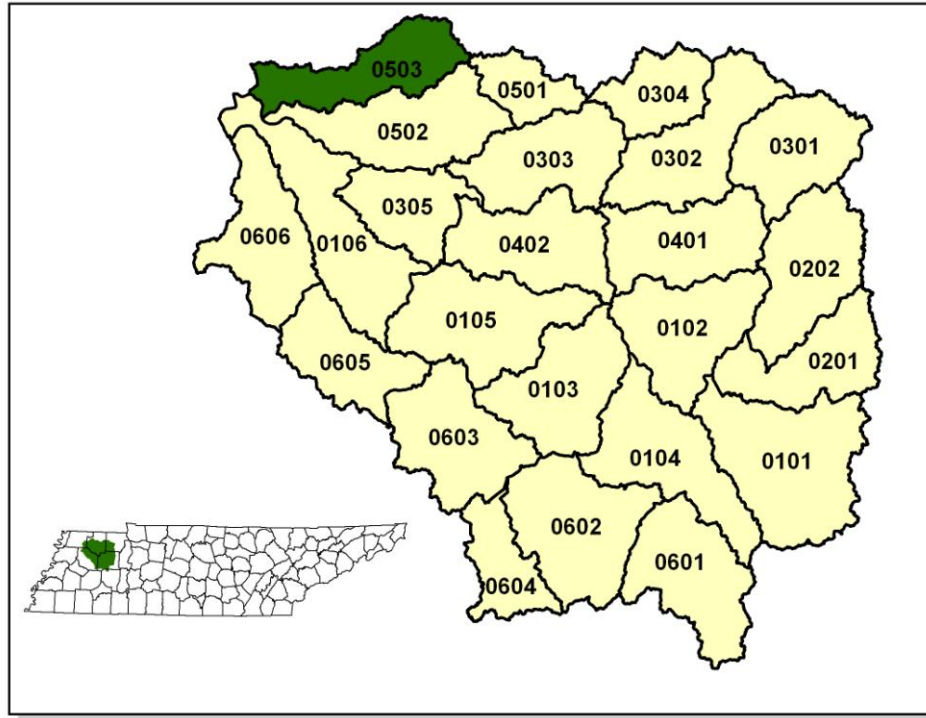
**Table 4-117. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

Summer Fallow (Other Cropland)	32.63
Wheat (Close Grown Cropland)	10.00
Soybeans (Row Crops)	7.66
Corn (Row Crops)	7.37
Cotton (Row Crops)	5.74
Other Cropland not Planted	5.08
Sorghum (Row Crops)	2.76
Legume (Pastureland)	1.39
Grass Forbs Legumes Mixed (Pastureland)	1.09
Conservation Reserve Program Land	0.52
Legume (Hayland)	0.49
Farmsteads and Ranch Headquarters	0.42
Grass (Hayland)	0.25
Grass (Pastureland)	0.16

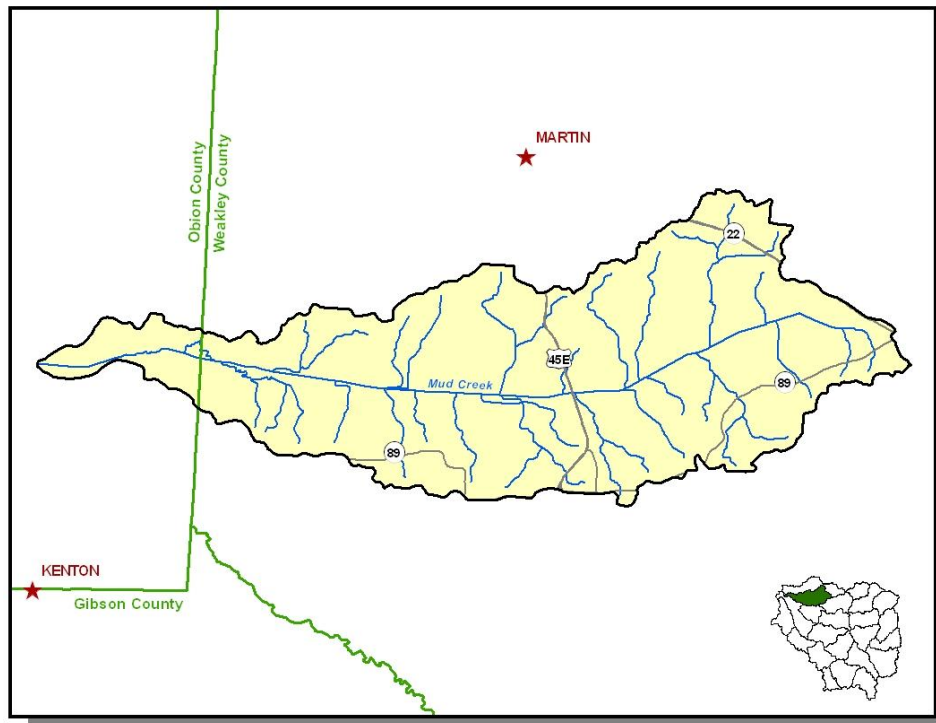
**Table 4-118. Annual Estimated Total Soil Loss in Subwatershed 080102030502.**

**4.2.R. 080102030503 (Cane Creek).**

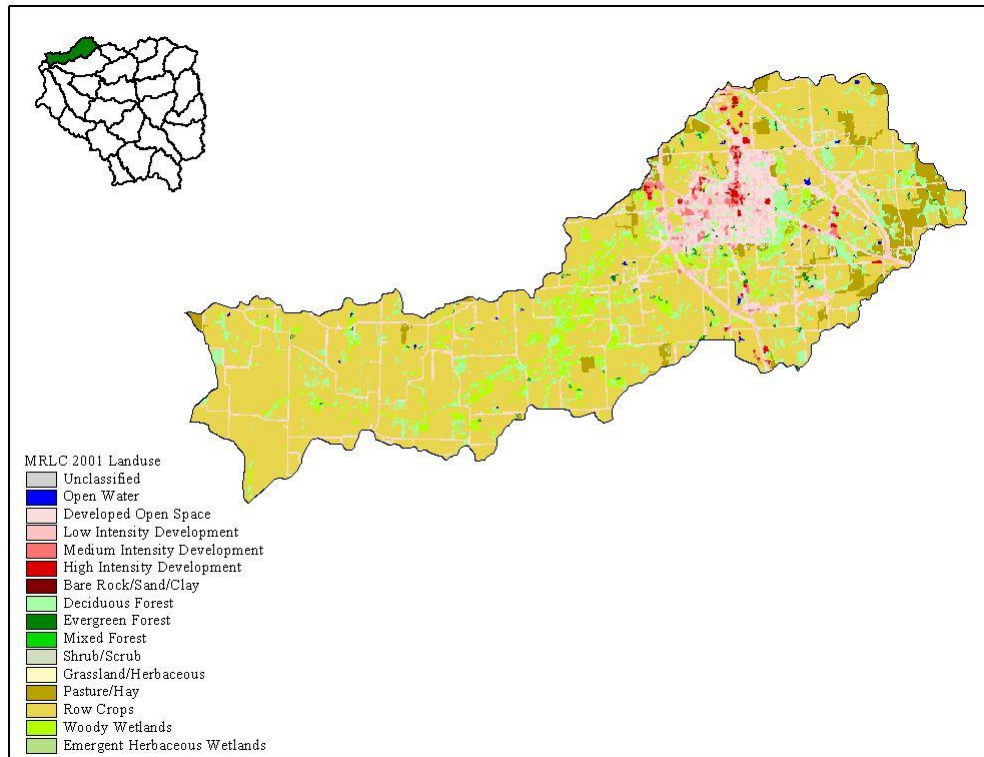
**4.2.R.i. General Description.**



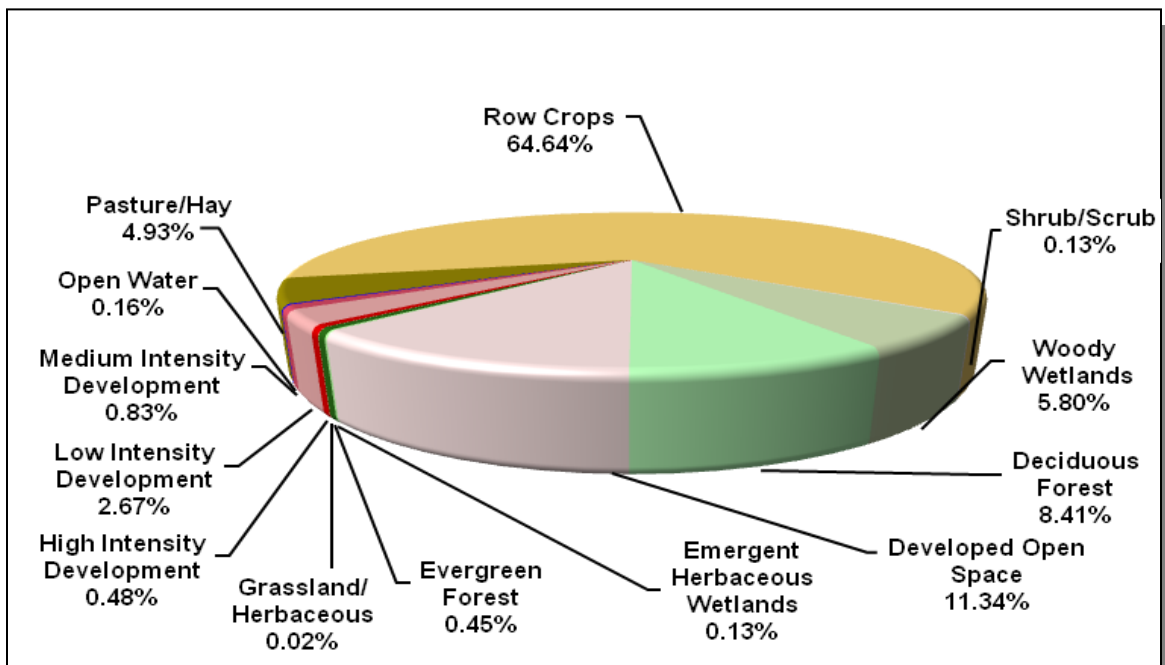
**Figure 4-180. Location of Subwatershed 080102030503.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



**Figure 4-181. Locational Details of Subwatershed 080102030503.**

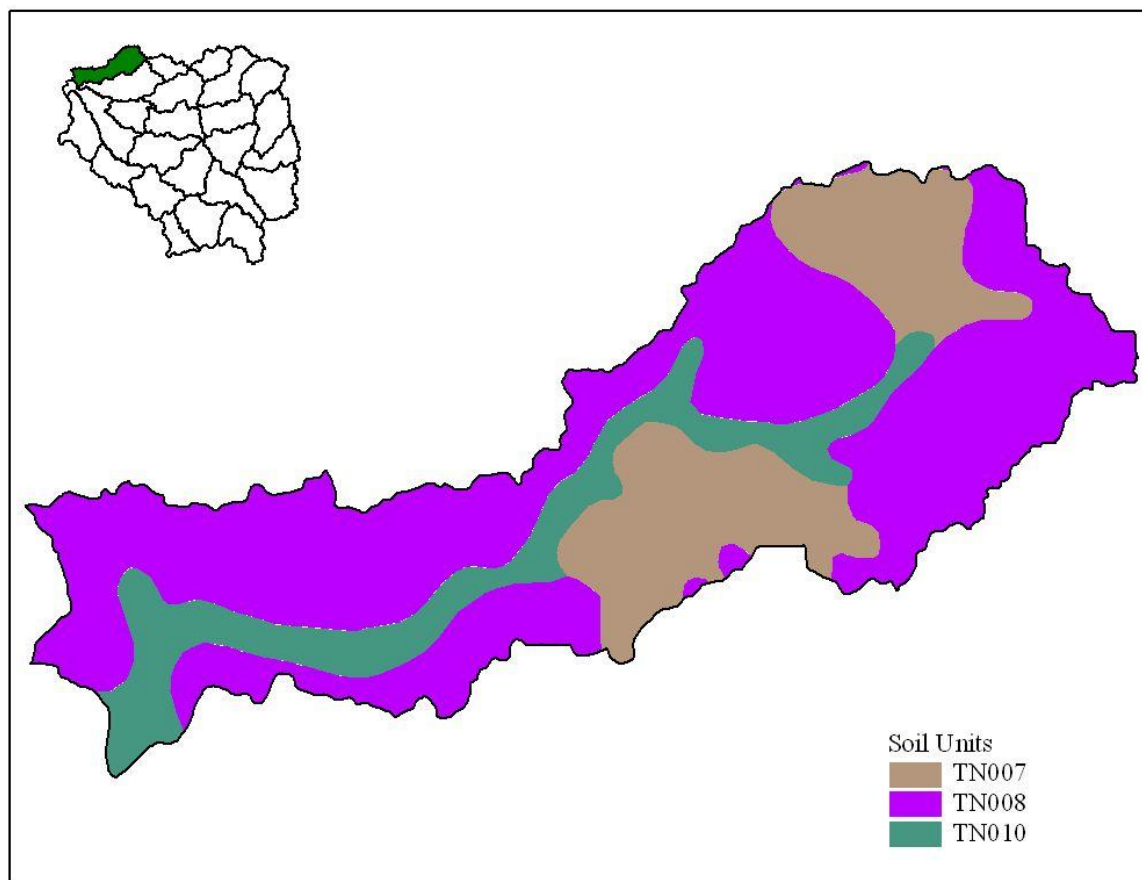


**Figure 4-182. Illustration of Land Use Distribution in Subwatershed 080102030503.**



**Figure 4-183. Land Use Distribution in Subwatershed 080102030503.** More information is provided in Appendix IV.





**Figure 4-184. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030503.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44

**Table 4-119. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030503.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Obion	31,717	32,069	32450	1.74	552	558	564	2.20
Weakley	31,972	32,808	34895	5.48	1,752	1,798	1,912	9.10
<b>Total</b>	<b>63,689</b>	<b>64,877</b>	<b>67345</b>		<b>2,304</b>	<b>2,356</b>	<b>2,476</b>	<b>7.50</b>

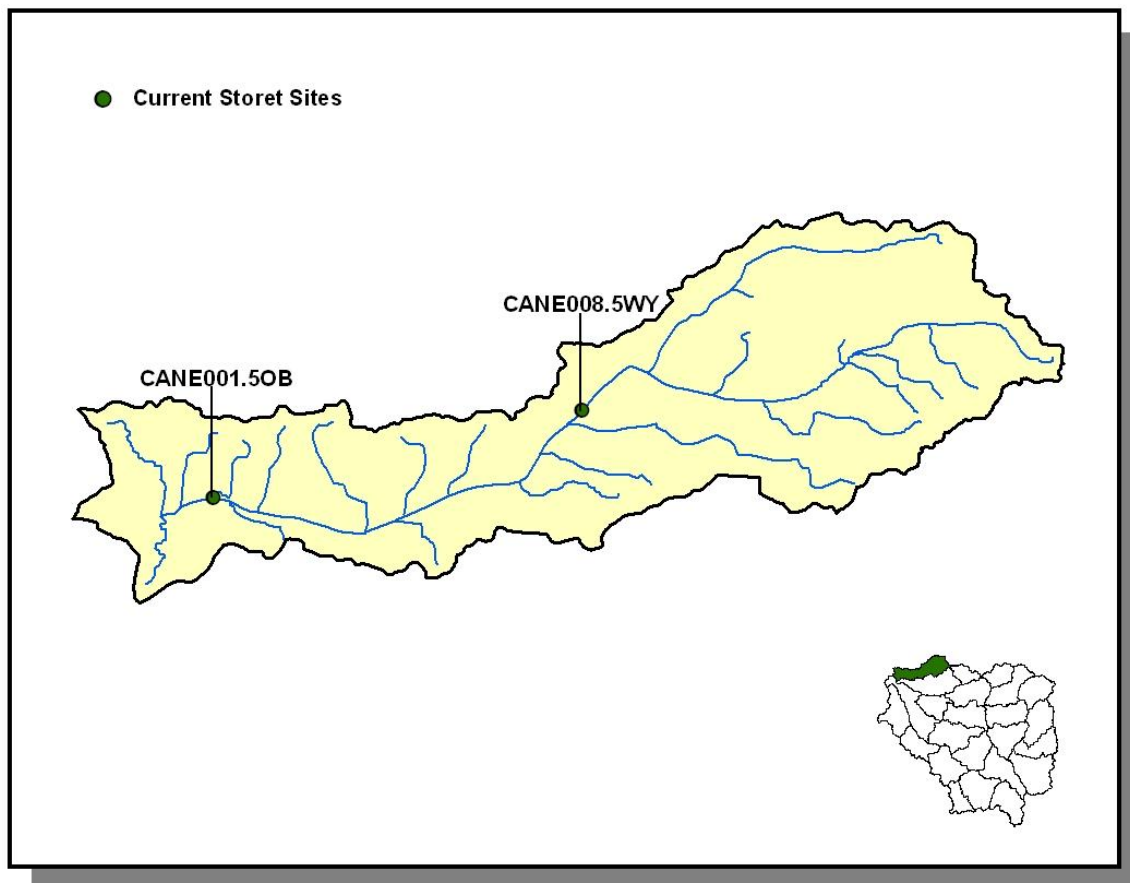
**Table 4-120. Population Estimates in Subwatershed 080102030503.**

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Martin	Weakley	8,600	3,104	3,039	65	0

**Table 4-121. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030503.**

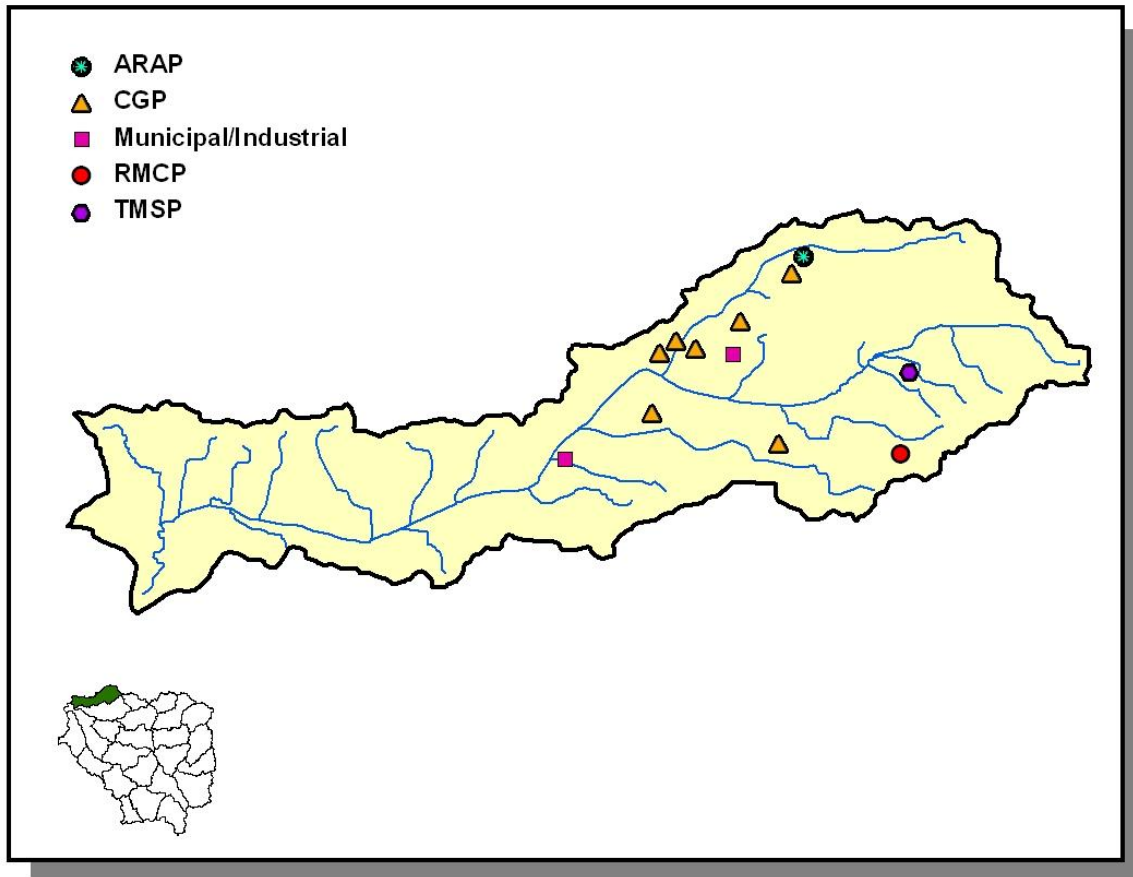
**4.2.R.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations located in subwatershed 080102030503.

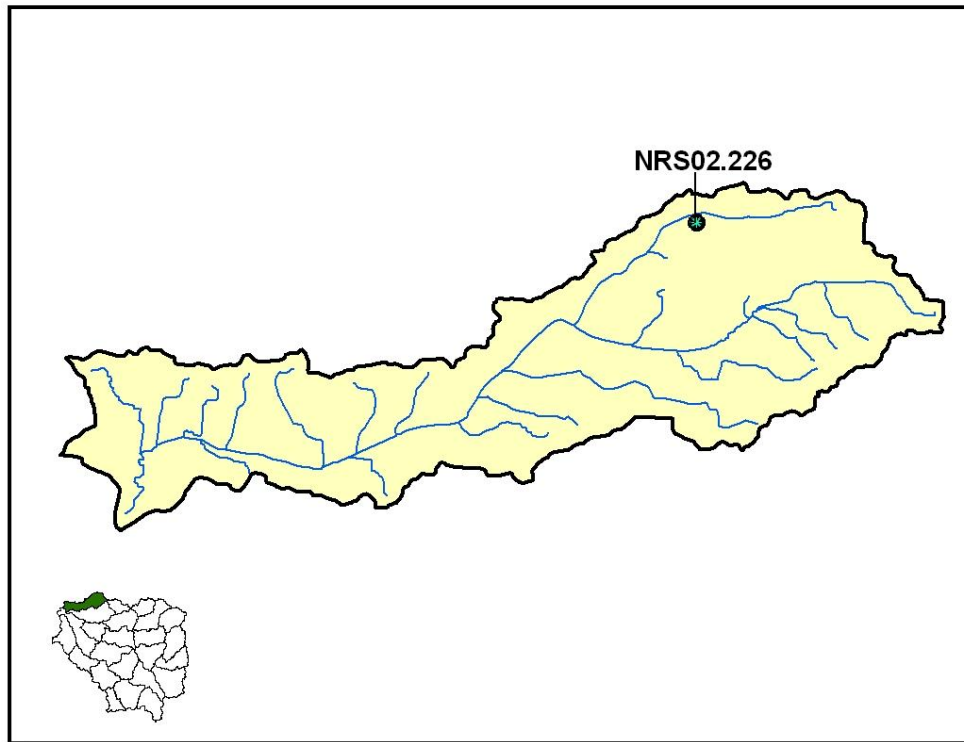


**Figure 4-185. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030503.** More information, including site names and locations, is provided in Appendix IV.

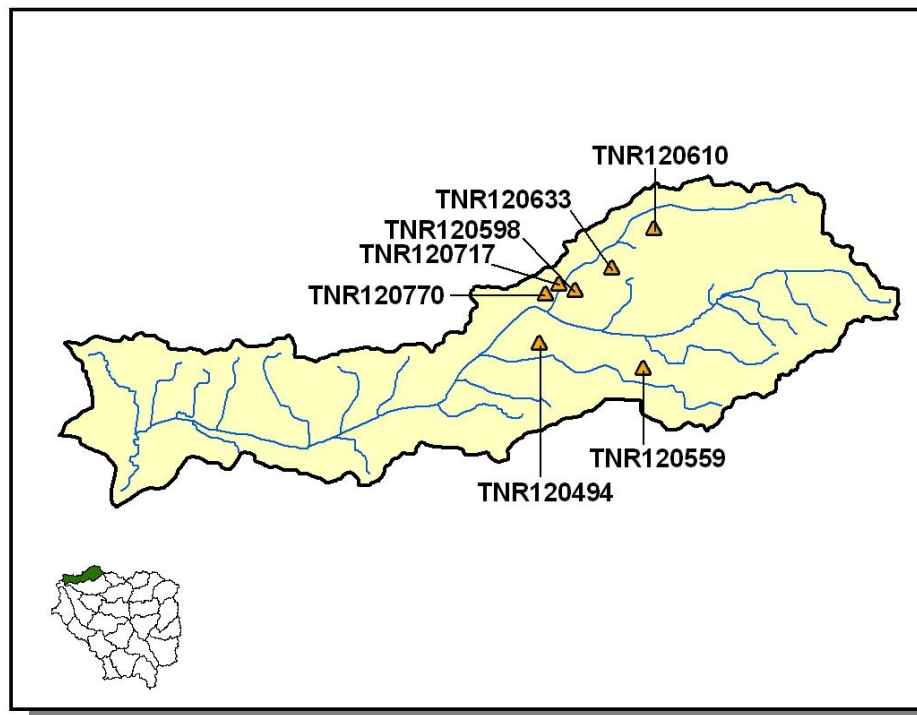
**4.2.R.iii. Permitted Activities.**



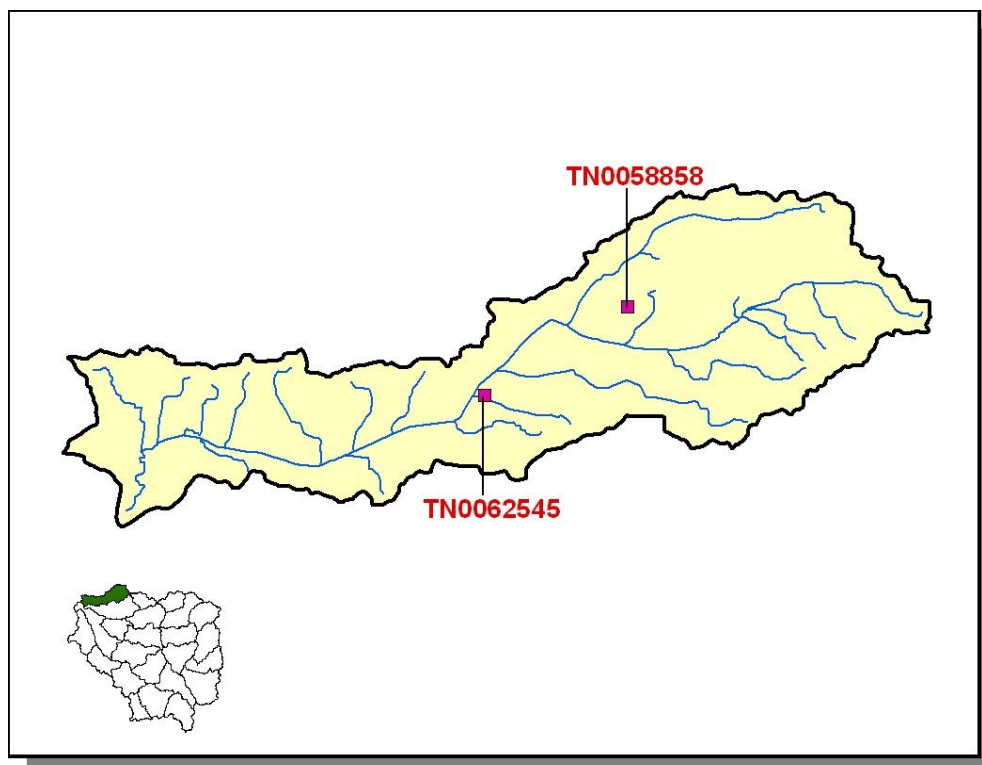
**Figure 4-186. Location of Permits Issued in Subwatershed 080102030503.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-187. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030503.** More information is provided in Appendix IV.



**Figure 4-188. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030503.** More information is provided in Appendix IV.



**Figure 4-189. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030503.** Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the name of the facility is provided in Appendix IV.

PERMIT #	7Q10	30Q5	DISCHARGE FLOW
TN0058858	0.0		0.0025
TN0062545		0.0	2.5

**Table 4-122. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030503.** Data are in million gallons per day (MGD). Data were obtained from permit files.

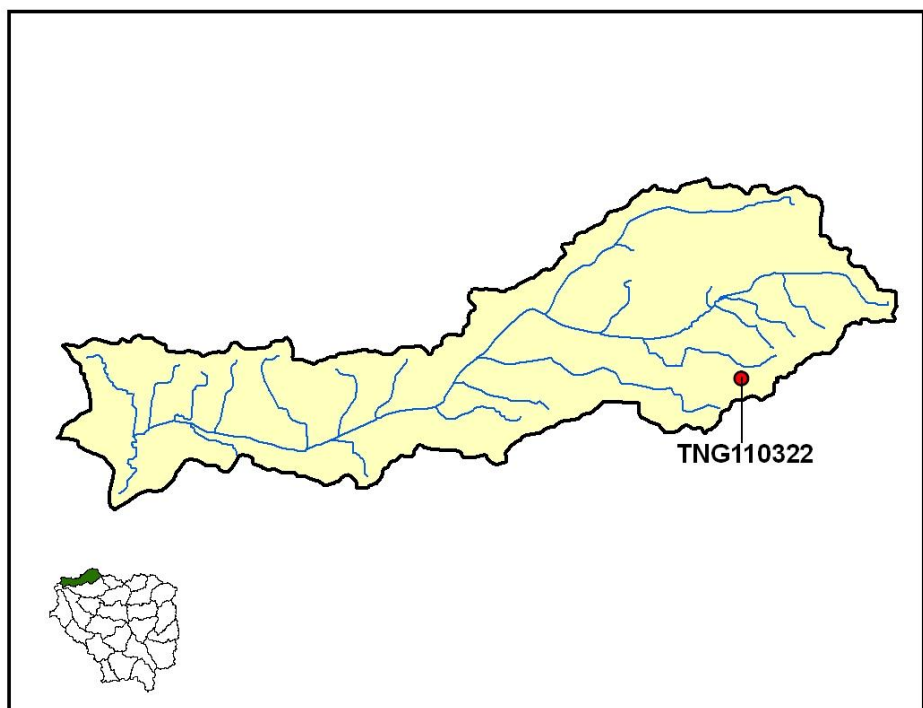
PERMIT #	CBOD <sub>5</sub>	CBOD % REMOVAL	AMMONIA AS N (TOTAL)	E. coli
TN0062545	X	X	X	X

**Table 4-123. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030503.** CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-day).

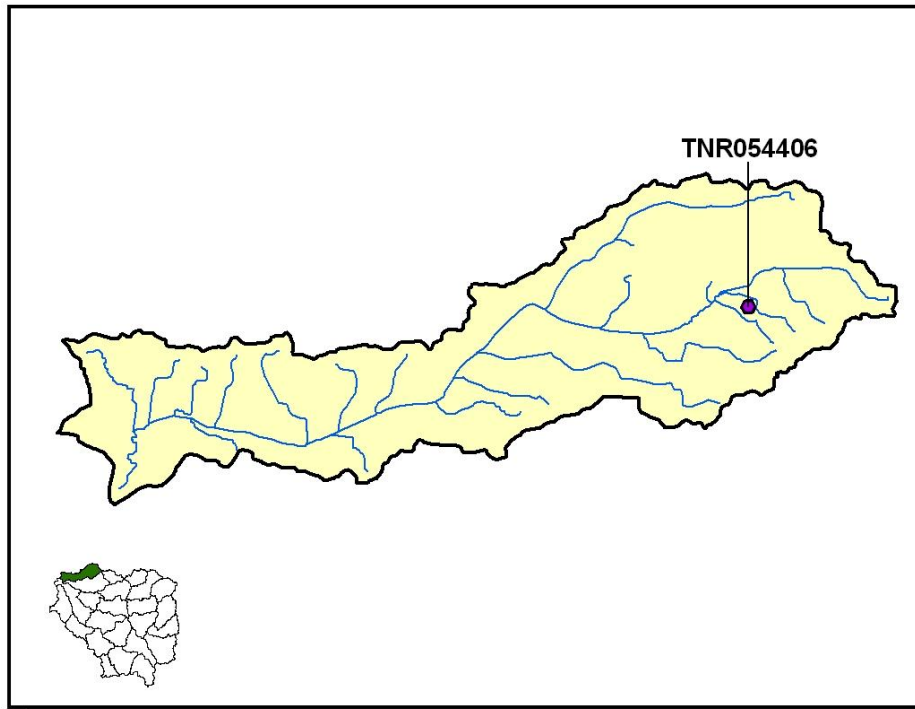


PERMIT #	WET	DO	TRC	FLOW	pH	TSS	TSS % REMOVAL	SS
TN0058858			X	X	X	X		
TN0062545	X	X	X	X	X	X	X	X

**Table 4-124. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030503.** WET, Whole Effluent Toxicity; DO, Dissolved Oxygen; TRC, Total Residual Chlorine; TSS, Total Suspended Solids; SS, Settleable Solids.



**Figure 4-190. Location of RMCP (Ready Mix Concrete Plant) facilities in Subwatershed 080102030503.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-191. Location of TMSPT (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030503.** More information is provided in Appendix IV.

**4.2.R.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Obion	8,033	18,503	118	7	21,149	205
Weakley	8,004	17,326	1,342	280	44,572	161

**Table 4-125. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Obion	67.6	67.6	4.4	20.8
Weakley	96.1	95.9	6.7	24.6

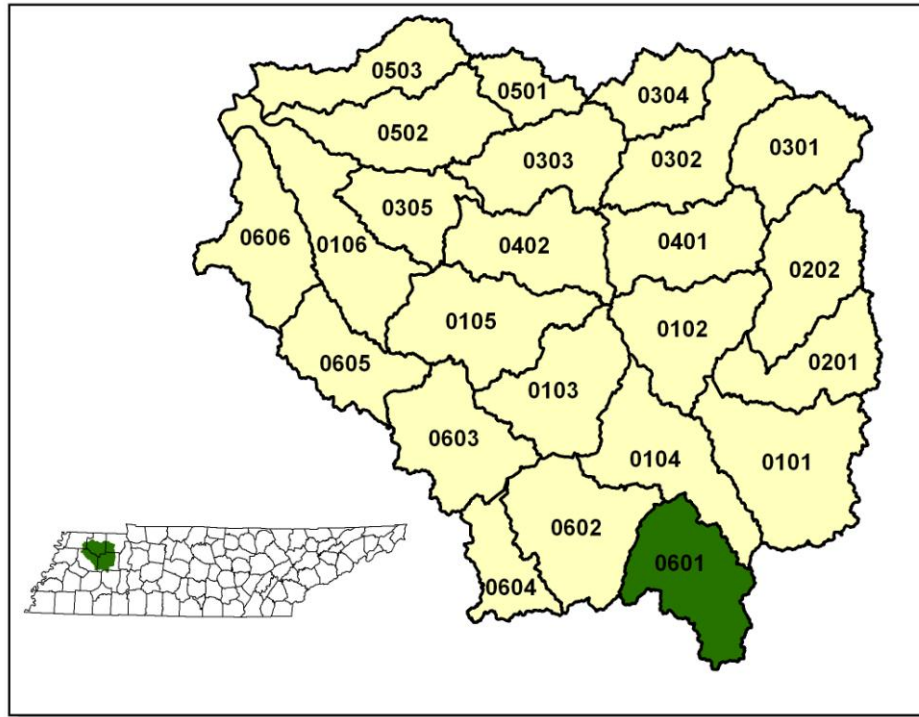
**Table 4-126. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Summer Fallow (Other Cropland)	32.63
Wheat (Close Grown Cropland)	9.96
Soybeans (Row Crops)	7.73
Other Cropland not Planted	6.82
Corn (Row Crops)	6.80
Cotton (Row Crops)	5.74
Sorghum (Row Crops)	2.76
Legume (Pastureland)	1.14
Grass Forbs Legumes Mixed (Pastureland)	1.05
Conservation Reserve Program Land	0.78
Legume (Hayland)	0.49
Farmsteads and Ranch Headquarters	0.37
Grass (Hayland)	0.29
Grass (Pastureland)	0.26

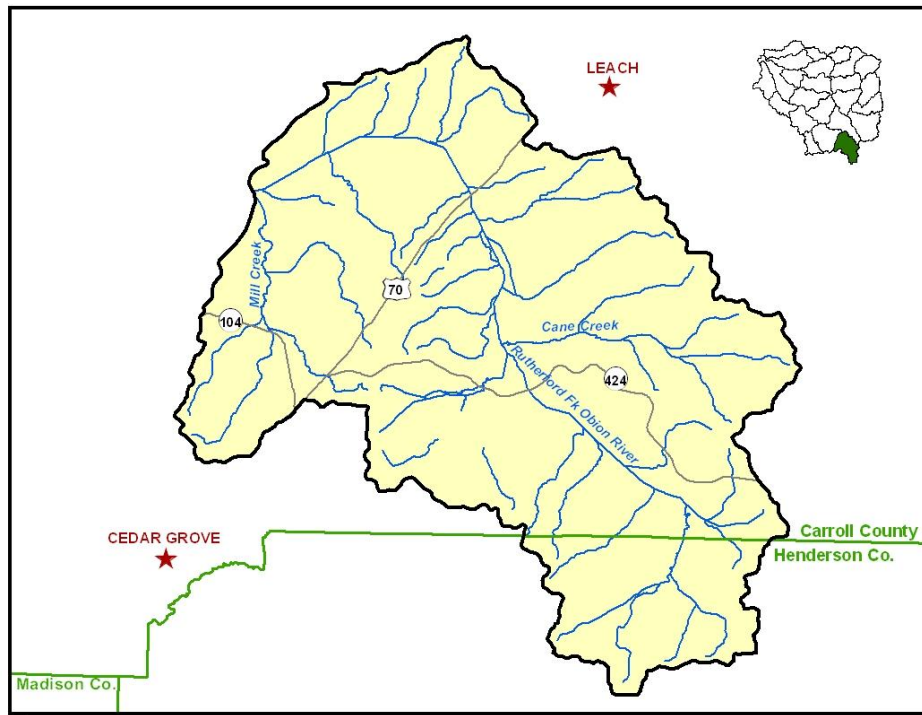
**Table 4-127. Annual Estimated Total Soil Loss in Subwatershed 080102030503.**

**4.2.S. 080102030601 (Rutherford Fork Obion River).**

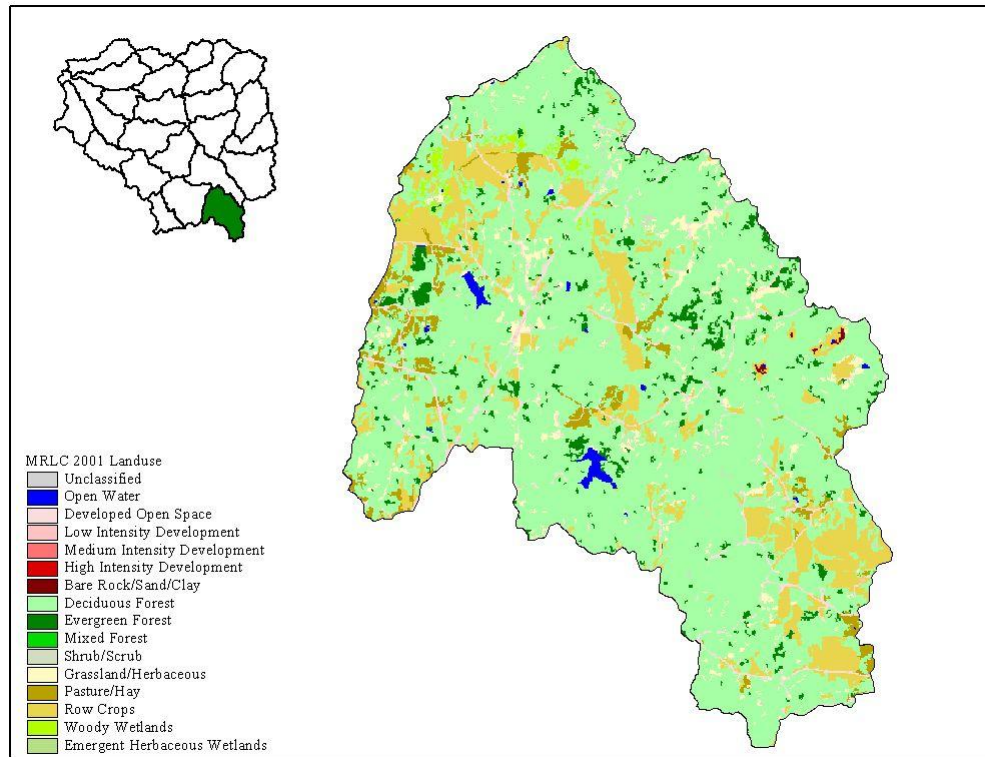
**4.2.S.i. General Description.**



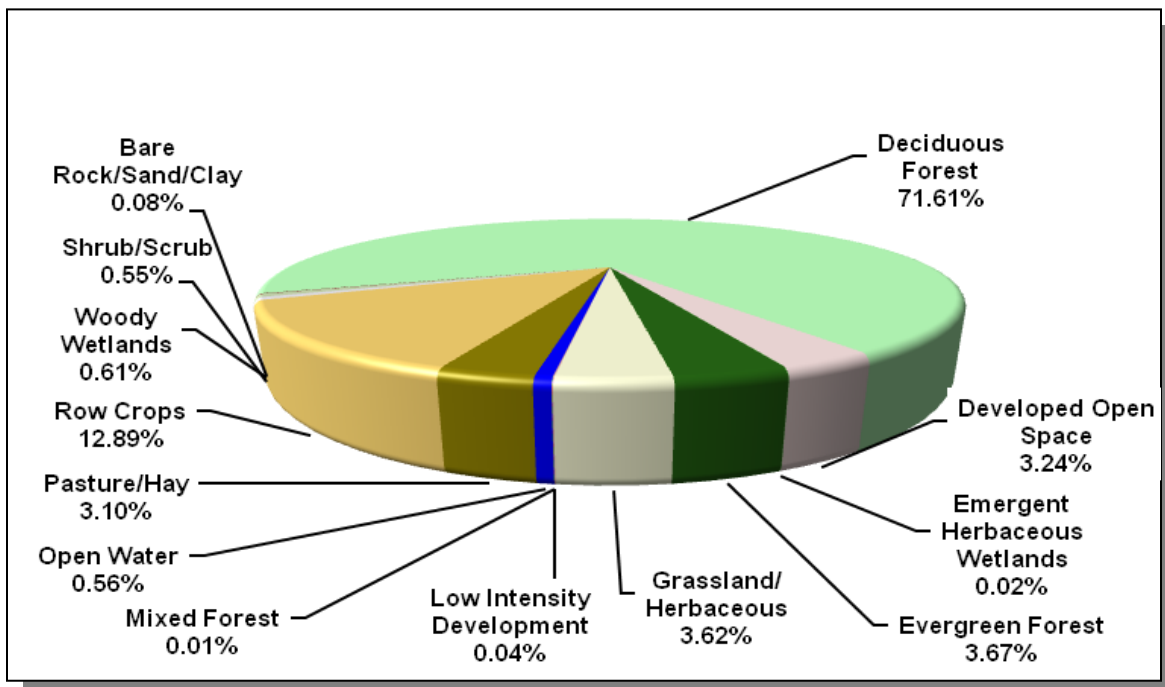
**Figure 4-192. Location of Subwatershed 080102030601.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



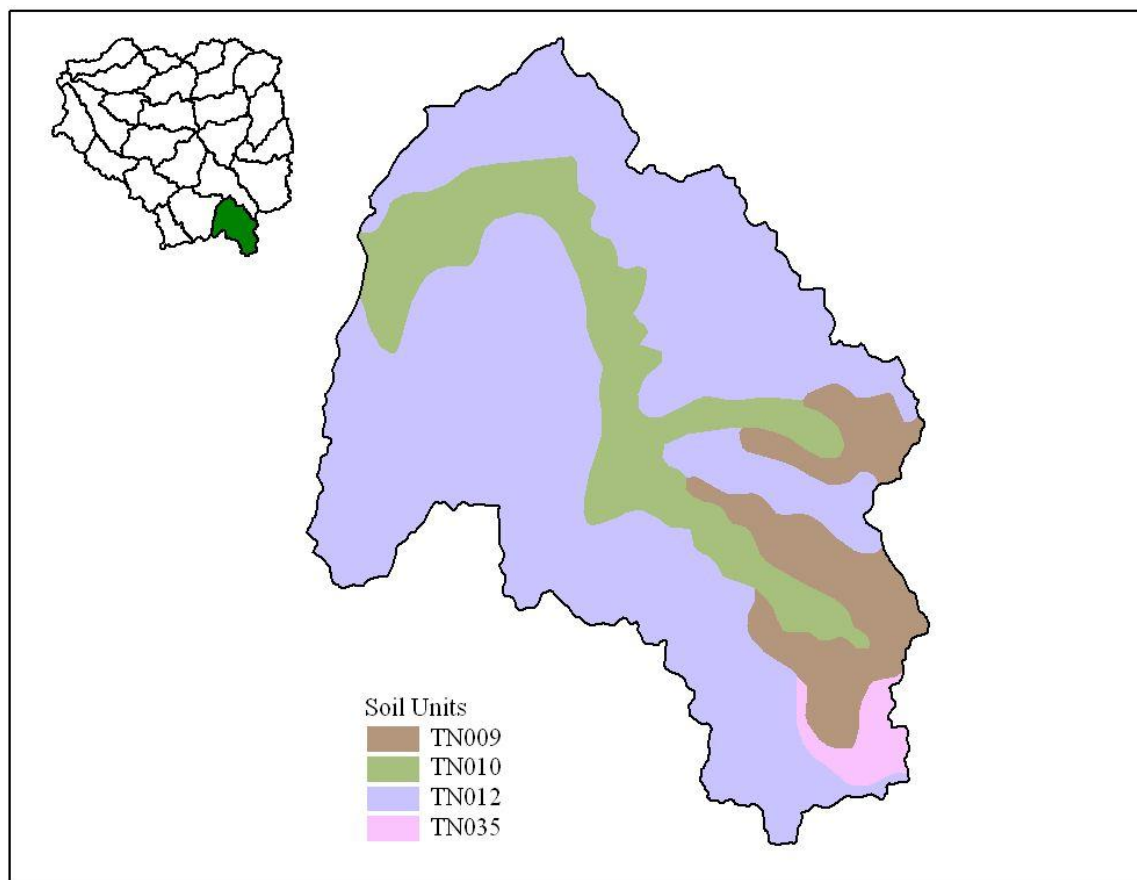
**Figure 4-193. Locational Details of Subwatershed 080102030601.**



**Figure 4-194. Illustration of Land Use Distribution in Subwatershed 080102030601.**



**Figure 4-195. Land Use Distribution in Subwatershed 080102030601.** More information is provided in Appendix IV.



**Figure 4-196. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030601.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN009	7.00	C	1.30	5.10	Silty Loam	0.43
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN012	1.00	C	2.52	5.13	Silty Loam	0.39
TN035	16.00	C	1.46	4.97	Silty Loam	0.40

**Table 4-128. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030601.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Carroll	27,514	28,990	29,475	7.34	2,020	2,128	2,163	7.10
Henderson	21,844	24,000	25,522	1.35	294	323	344	17.00
<b>Total</b>	<b>49,358</b>	<b>52,990</b>	<b>54,997</b>		<b>2,314</b>	<b>2,451</b>	<b>2,507</b>	<b>8.30</b>

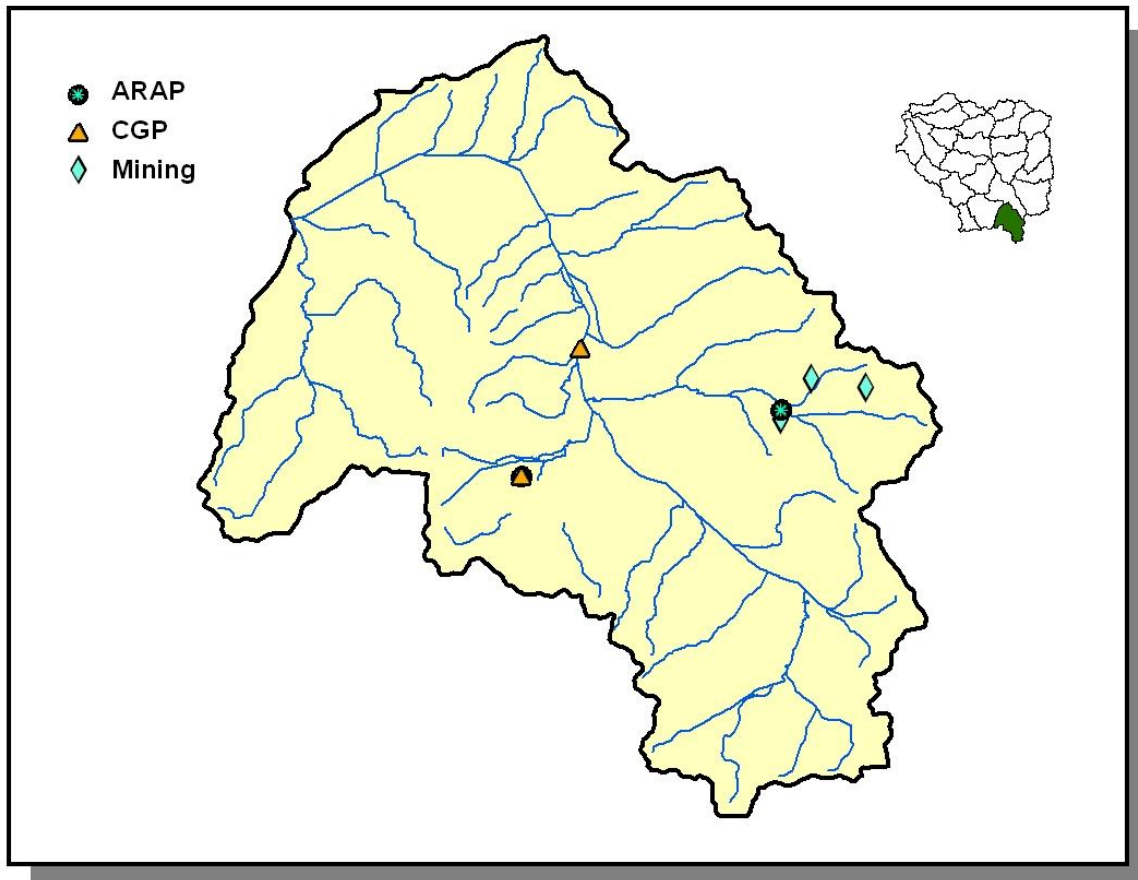
**Table 4-129. Population Estimates in Subwatershed 080102030601.**



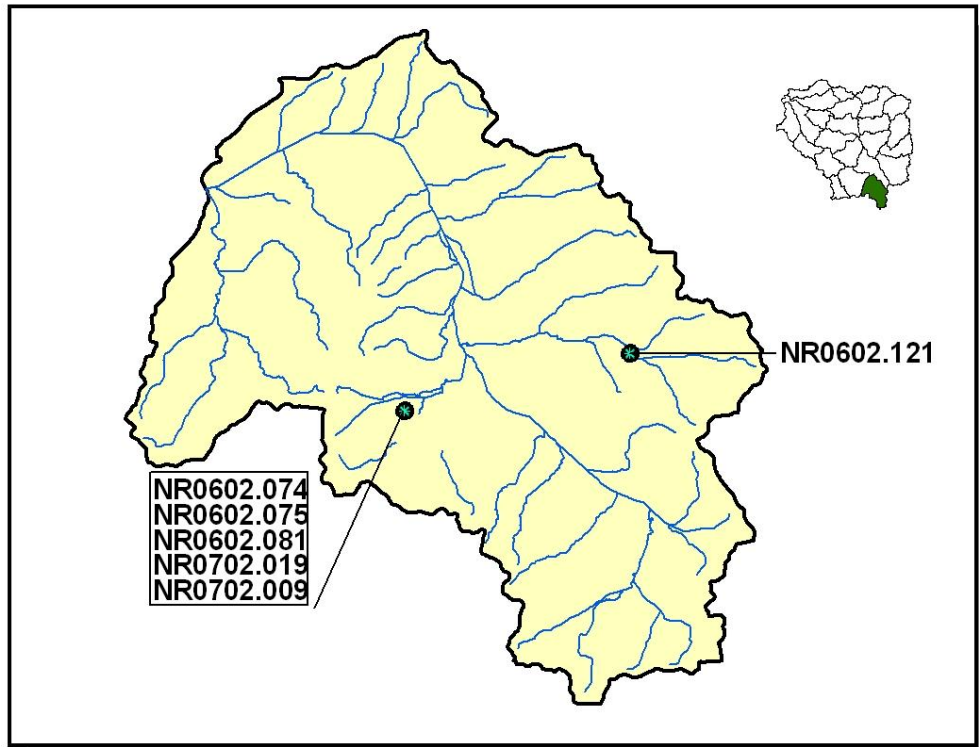
#### **4.2.S.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations or storet sites located in subwatershed 080102030601.

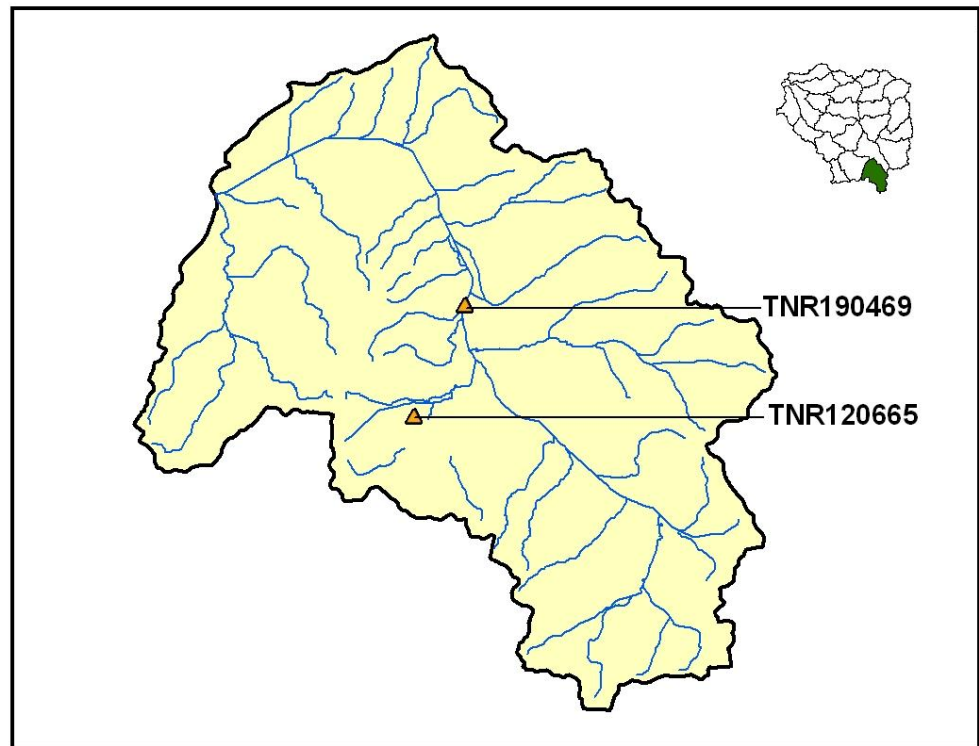
#### **4.2.S.iii. Permitted Activities.**



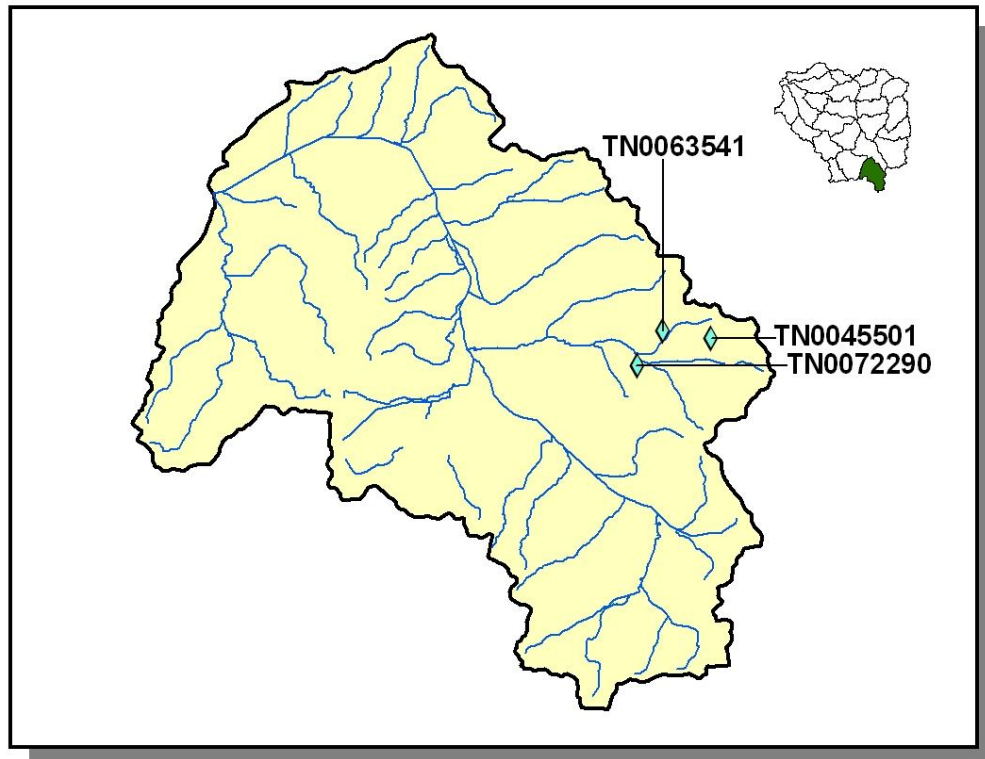
**Figure 4-197. Location of Permits Issued in Subwatershed 080102030601.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-198. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030601.** More information is provided in Appendix IV.



**Figure 4-199. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030601.** More information is provided in Appendix IV.



**Figure 4-200. Location of Permitted Mining Facilities in Subwatershed 080102030601.** More information is provided in Appendix IV.

**4.2.S.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	
Henderson	12,709	28,924	65	26	10,485	182

**Table 4-130. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0
Henderson	158.5	158.5	3.6	12.8

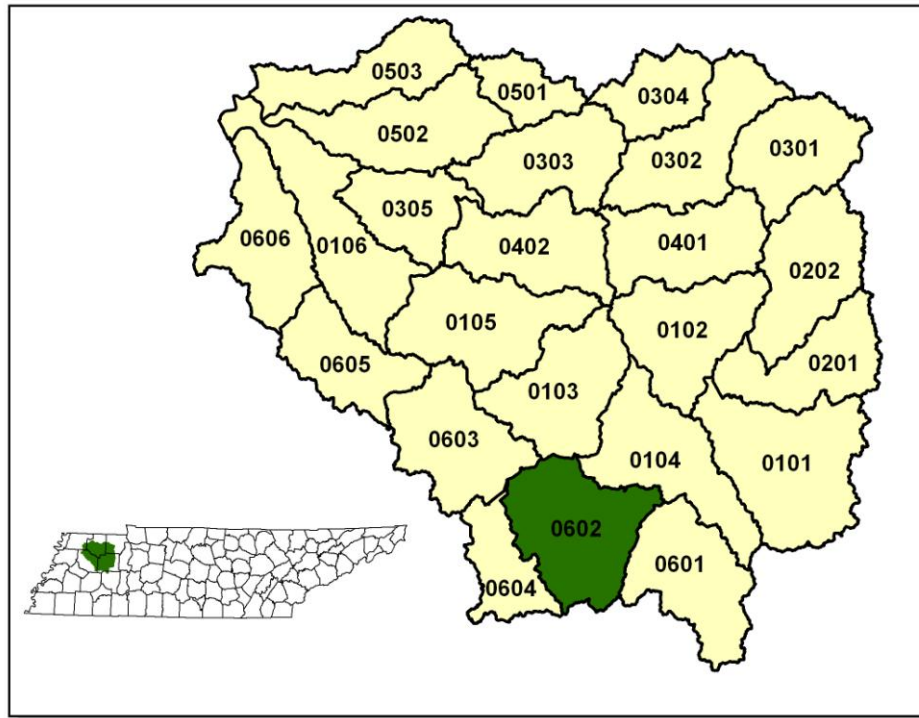
**Table 4-131. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Wheat (Close Grown Cropland)	18.5
Soybeans (Row Crops)	9.66
Other Cropland not Planted	9.12
Cotton (Row Crops)	7.26
Corn (Row Crops)	6.09
Conservation Reserve Program Land	1.10
Farmsteads and Ranch Headquarters	1.03
Grass Forbs Legumes Mixed (Pastureland)	0.70
Other Land in Farms	0.59
Legume Grass (Hayland)	0.46
Grass (Pastureland)	0.46
Grass (Hayland)	0.19
Legume (Hayland)	0.07

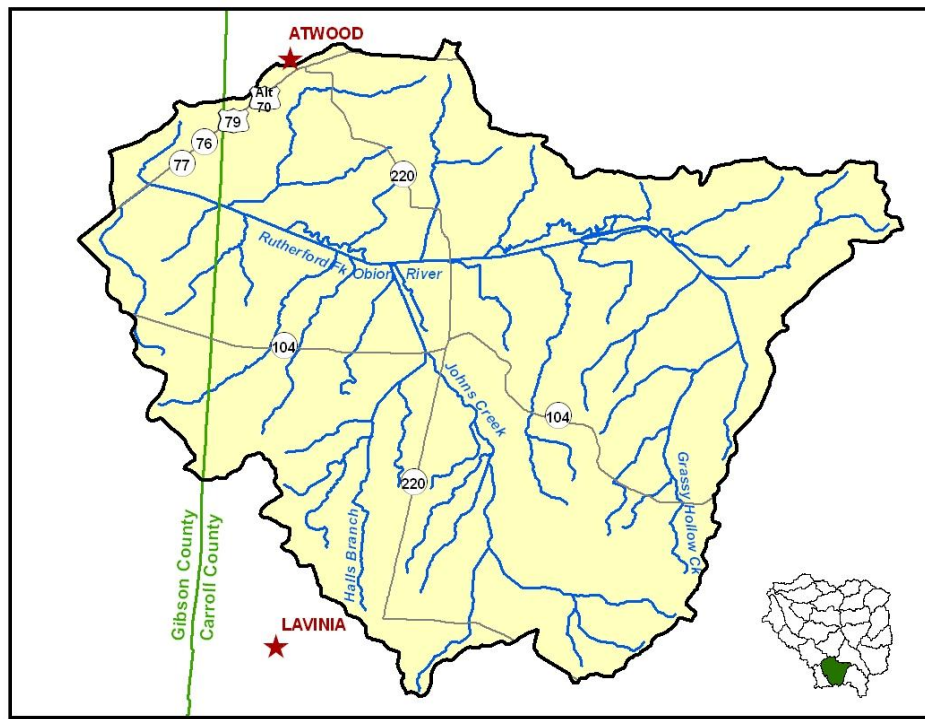
**Table 4-132. Annual Estimated Total Soil Loss in Subwatershed 080102030601.**

#### 4.2.T. 080102030602 (Rutherford Fork Obion River).

##### 4.2.T.i. General Description.

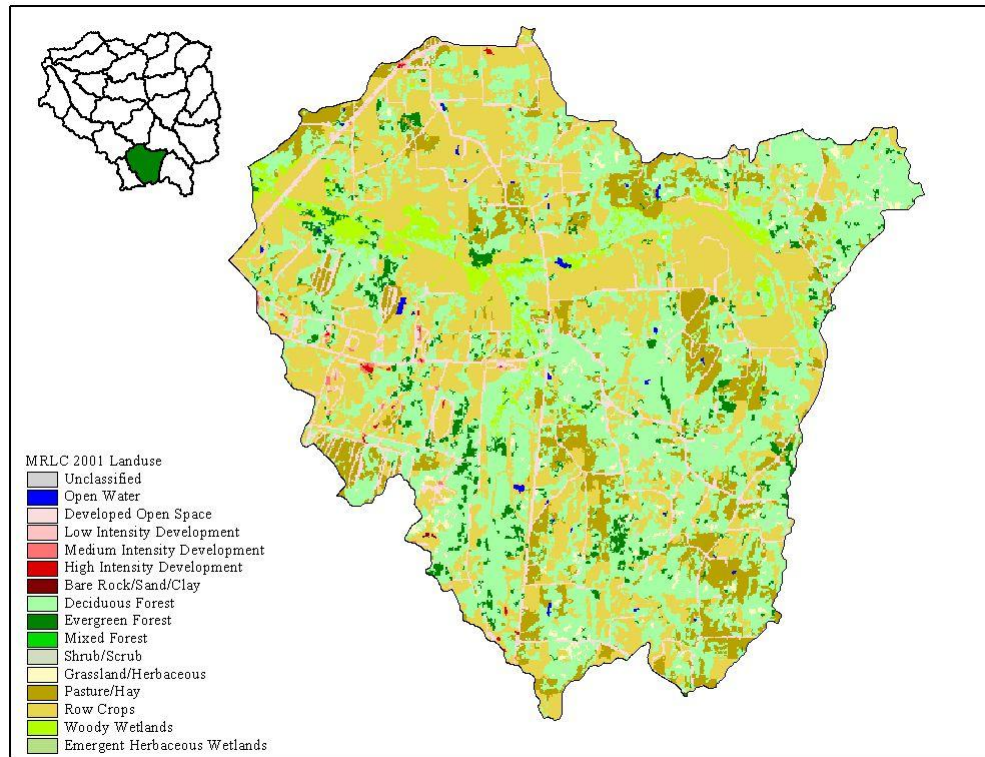


**Figure 4-201. Location of Subwatershed 080102030602.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.

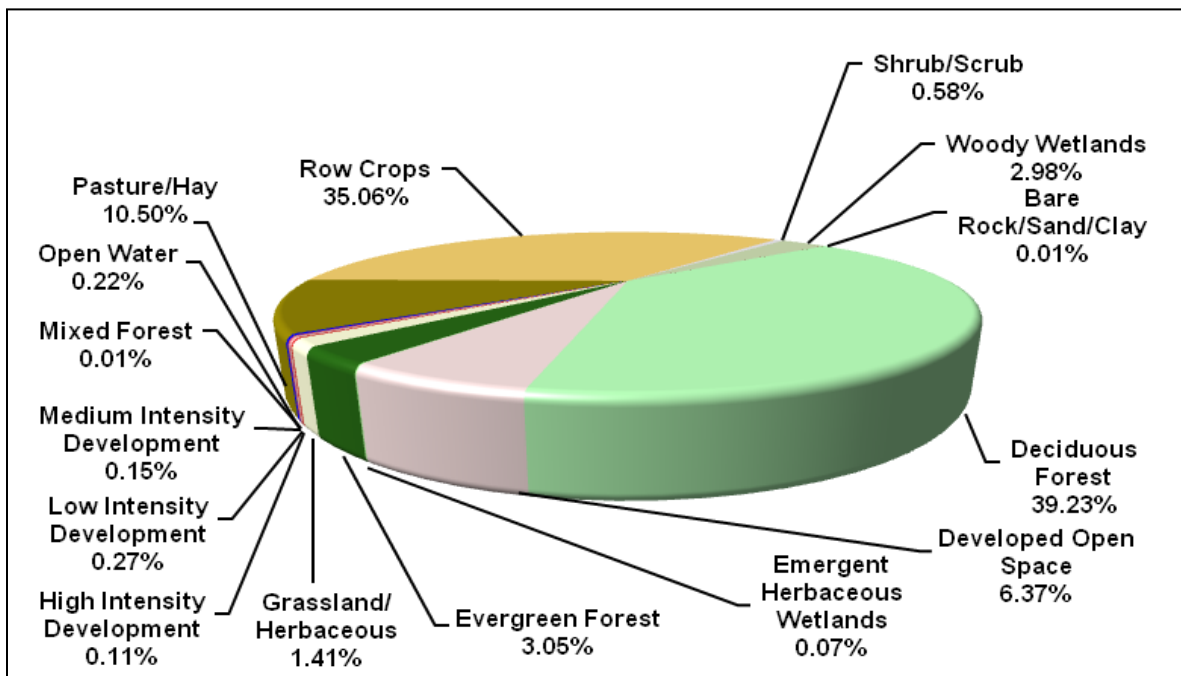


**Figure 4-202. Locational Details of Subwatershed 080102030602.**



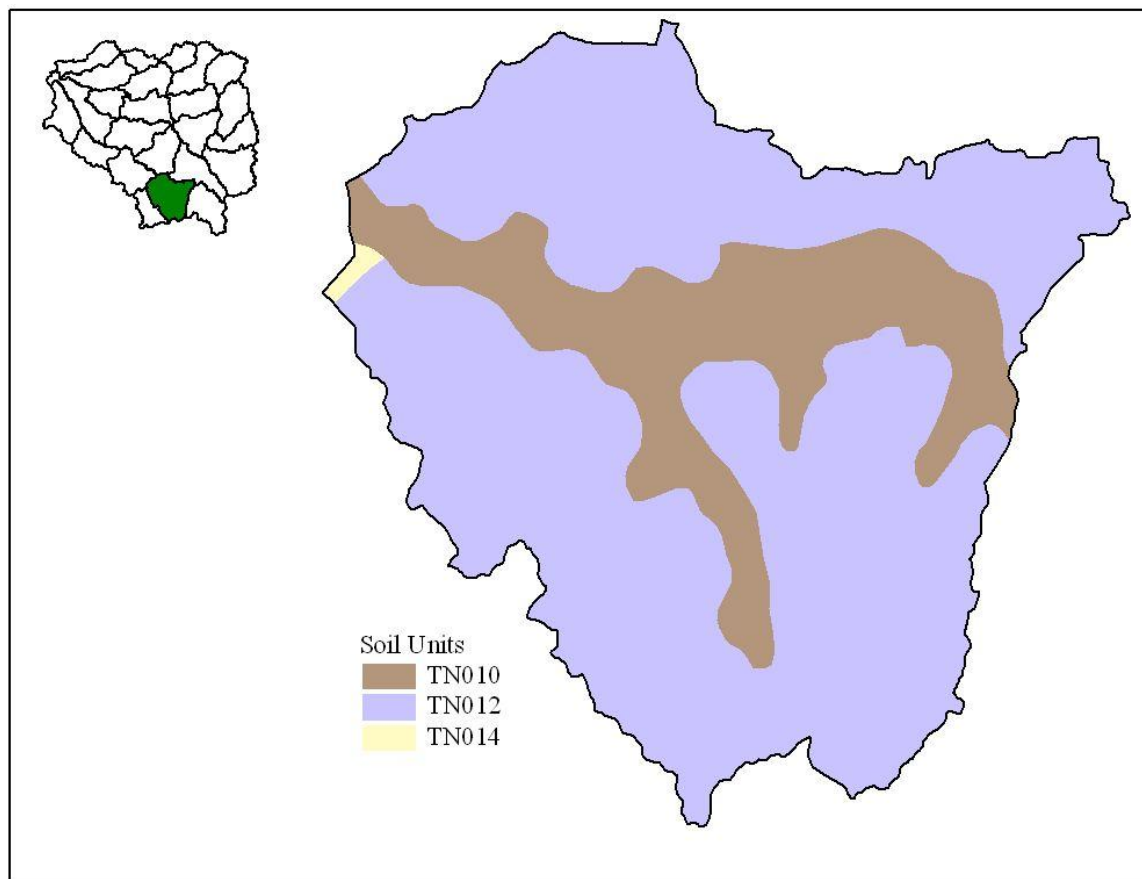


**Figure 4-203. Illustration of Land Use Distribution in Subwatershed 080102030602.**



**Figure 4-204. Land Use Distribution in Subwatershed 080102030602.** More information is provided in Appendix IV.





**Figure 4-205. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030602.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN012	1.00	C	2.52	5.13	Silty Loam	0.39
TN014	30.00	C	1.30	5.12	Silty Loam	0.47

**Table 4-133. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030602.** The definition of "Hydrologic Group" is provided in Appendix IV.

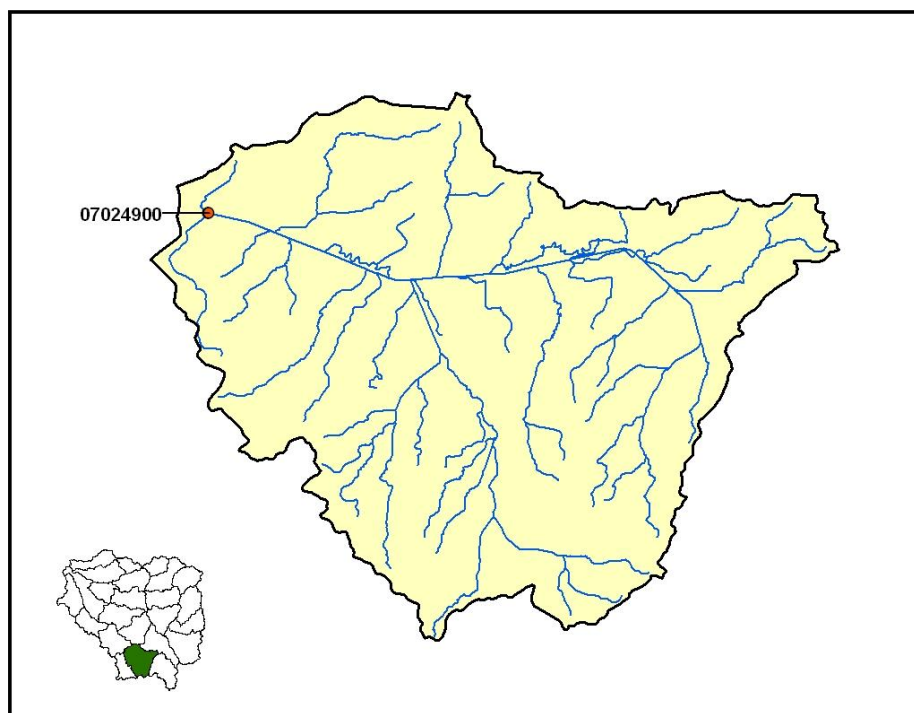
County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Carroll	27,514	28,990	29,475	9.10	2,503	2,637	2,681	7.10
Gibson	46,315	48,083	48,152	0.90	415	431	431	3.90
<b>Total</b>	<b>73,829</b>	<b>77,073</b>	<b>77,627</b>		<b>2,918</b>	<b>3,068</b>	<b>3,112</b>	<b>6.60</b>

*Table 4-134. Population Estimates in Subwatershed 080102030602.*

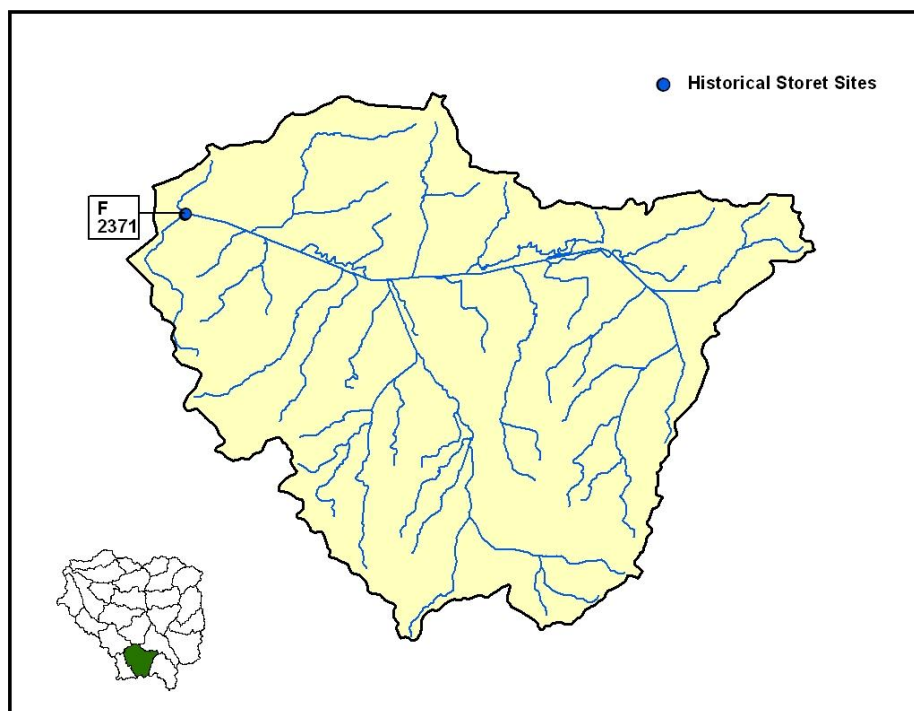
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Atwood	Carroll	1,080	454	417	36	1

*Table 4-135. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030602.*

**4.2.T.ii. USGS Gaging Stations and STORET Sites.**

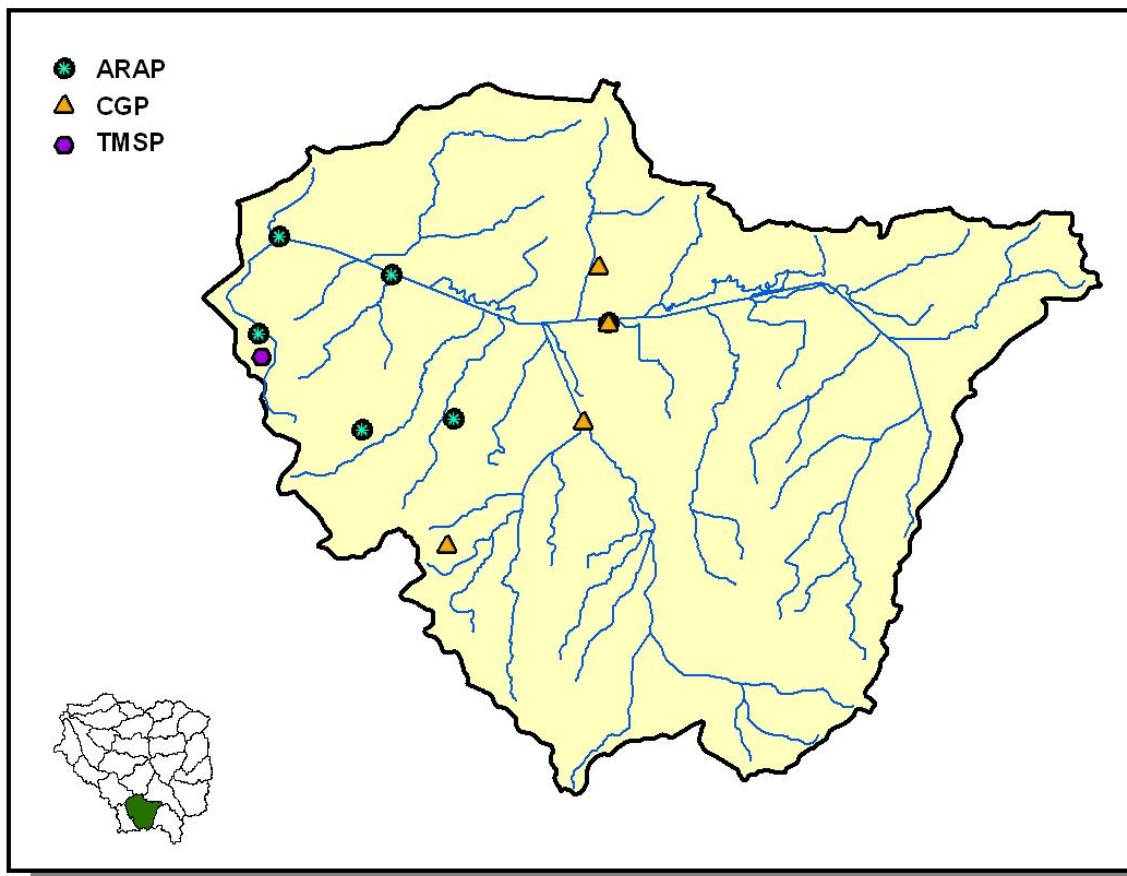


**Figure 4-206. Location of USGS Continuous Record Gaging Stations in Subwatershed 080102030602.** More information is provided in Appendix IV.

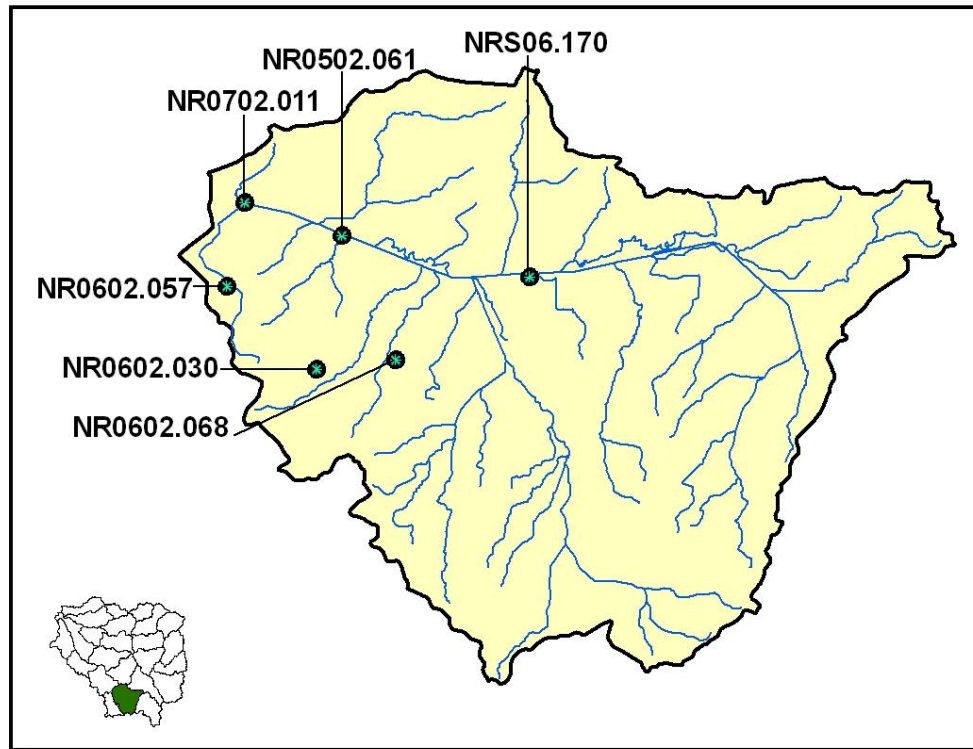


**Figure 4-207. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030602.** More information, including site names and locations, is provided in Appendix IV.

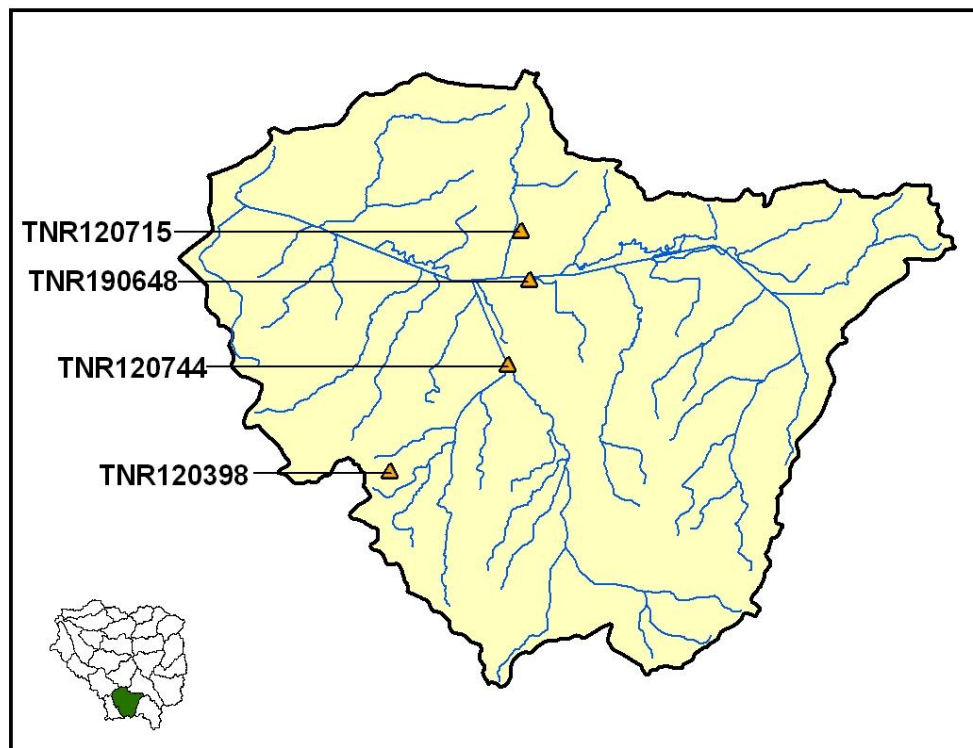
**4.2.T.iii. Permitted Activities.**



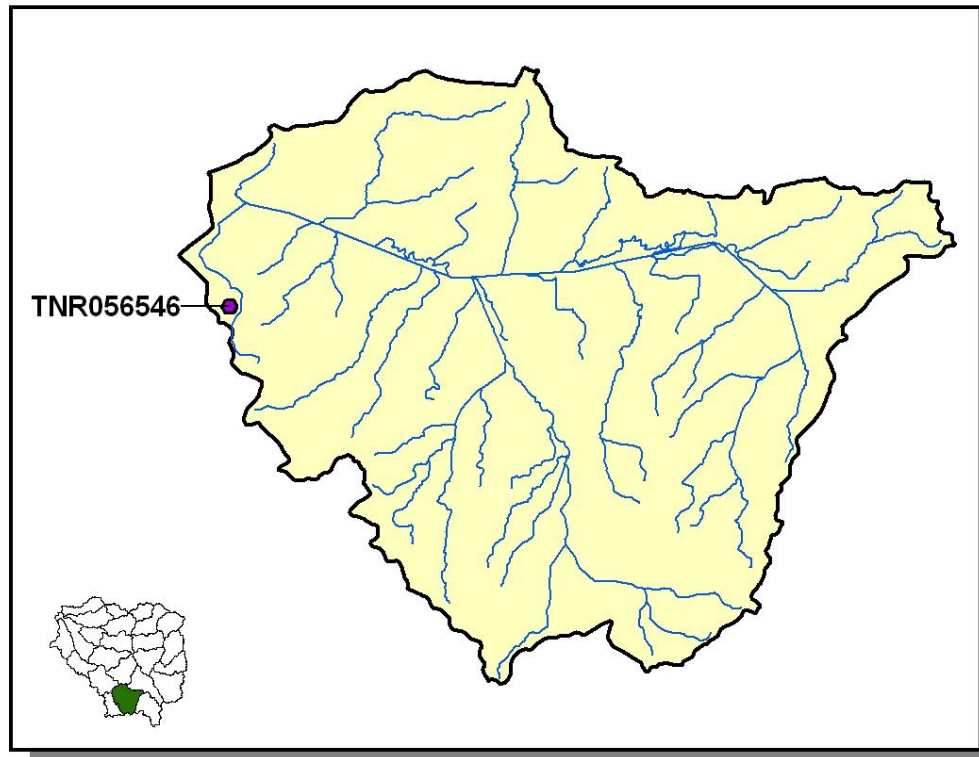
**Figure 4-208. Location of Permits Issued in Subwatershed 080102030602.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-209. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030602.** More information is provided in Appendix IV.



**Figure 4-210. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030602.** More information is provided in Appendix IV.



**Figure 4-211. Location of TMSPT (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030602.** More information is provided in Appendix IV.



**4.2.T.iv. Nonpoint Source Contributions.**

<b>LIVESTOCK COUNTS</b>						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	
Gibson	9,766	21,779	221	605	7,506	74

**Table 4-136. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0
Gibson	36.4	36.4	2.0	8.6

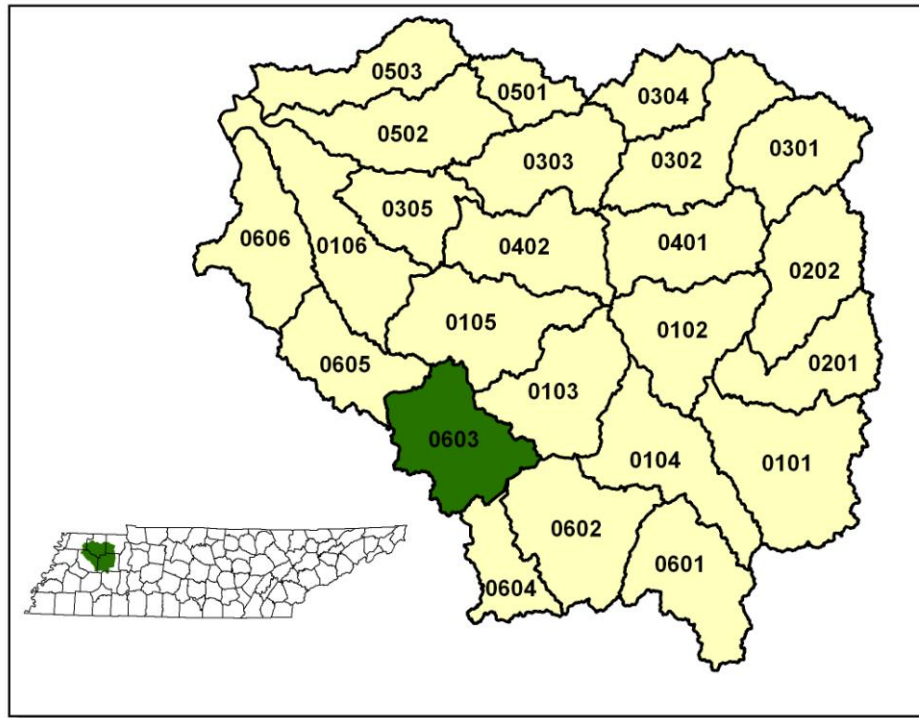
**Table 4-137. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Wheat (Close Grown Cropland)	18.5
Soybeans (Row Crops)	10.06
Other Cropland not Planted	8.70
Cotton (Row Crops)	8.44
Corn (Row Crops)	6.47
Sorghum (Row Crops)	6.38
Conservation Reserve Program Land	1.16
Farmsteads and Ranch Headquarters	1.05
Other Land in Farms	0.66
Grass Forbs Legumes Mixed (Pastureland)	0.60
Legume Grass (Hayland)	0.46
Grass (Pastureland)	0.38
Grass (Hayland)	0.22
Legume (Hayland)	0.07

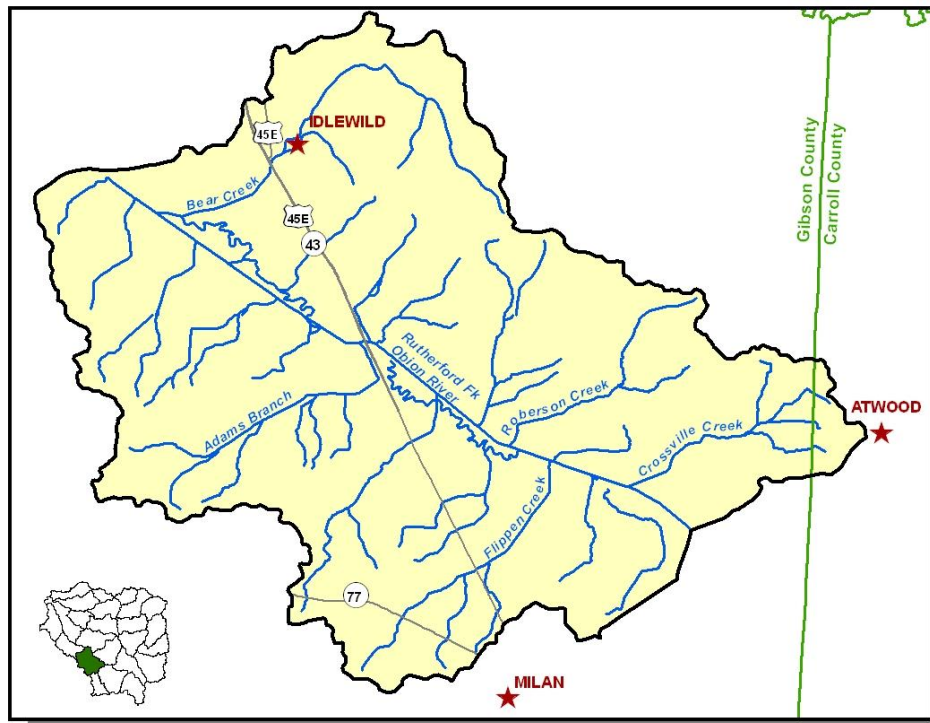
**Table 4-138. Annual Estimated Total Soil Loss in Subwatershed 080102030602.**

**4.2.U. 080102030603 (Rutherford Fork Obion River).**

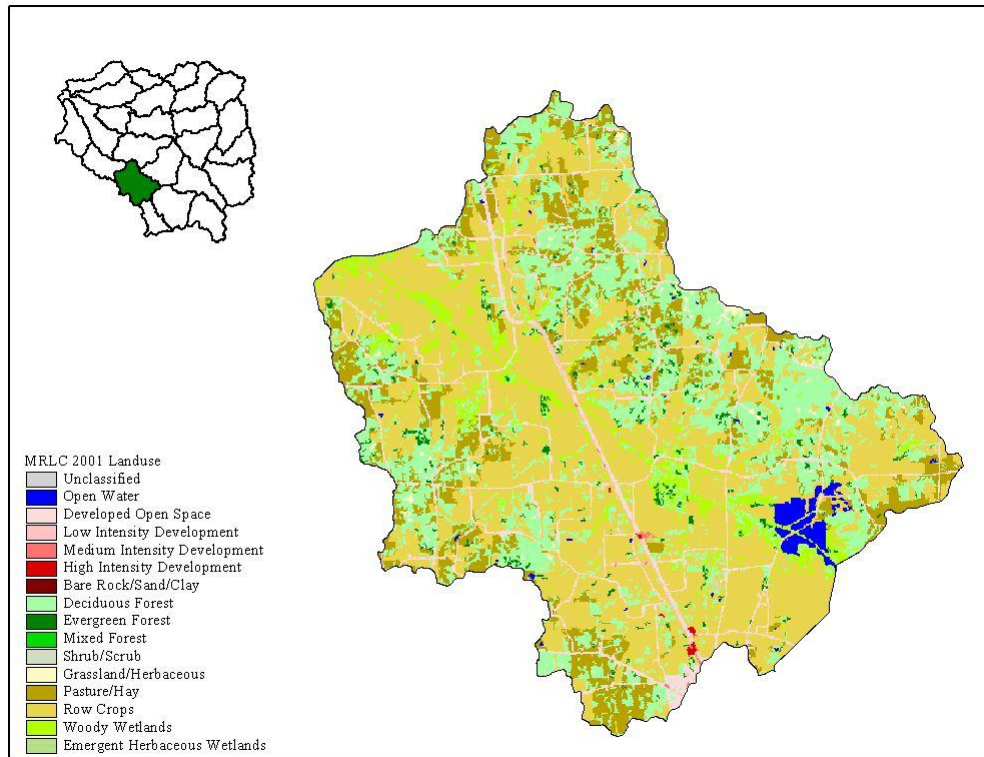
**4.2.U.i. General Description.**



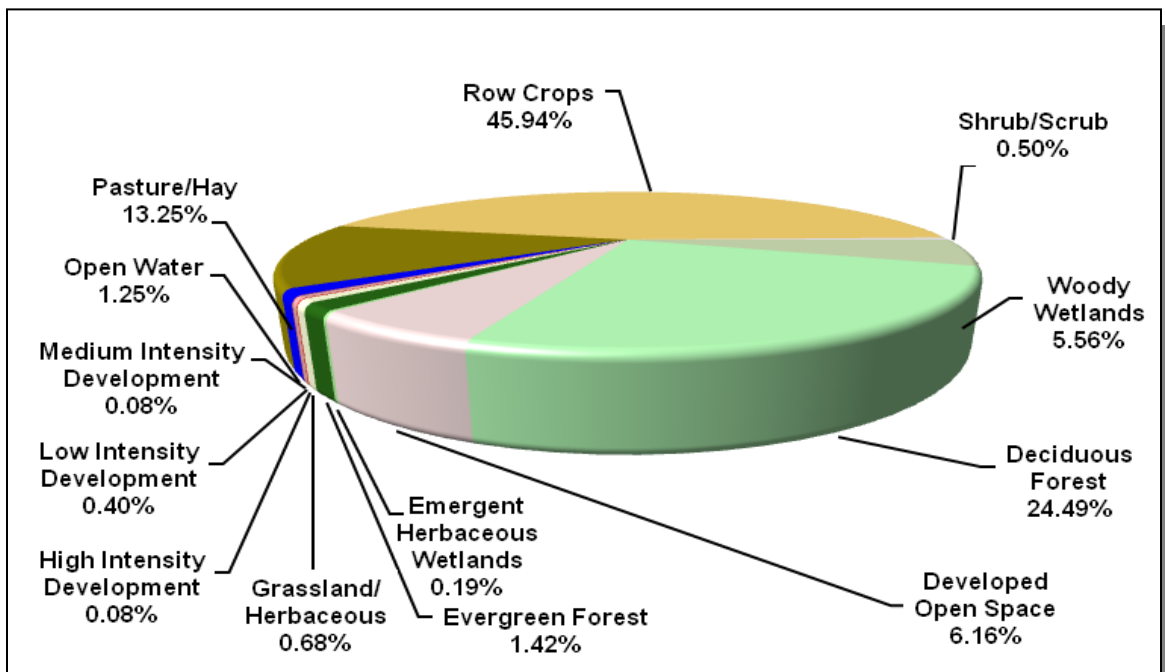
**Figure 4-212. Location of Subwatershed 080102030603.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



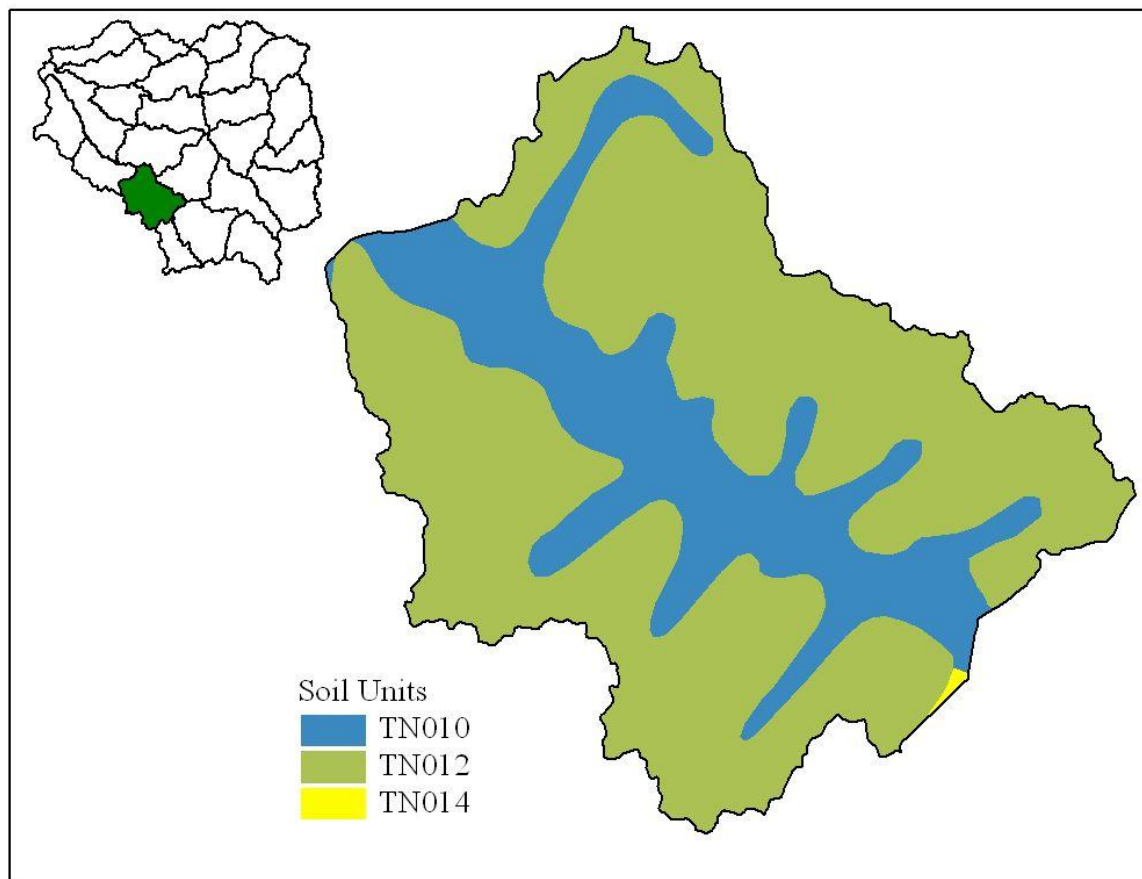
**Figure 4-213. Locational Details of Subwatershed 080102030603.**



**Figure 4-214. Illustration of Land Use Distribution in Subwatershed 080102030603.**



**Figure 4-215. Land Use Distribution in Subwatershed 080102030603.** More information is provided in Appendix IV.



**Figure 4-216. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030603.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN012	1.00	C	2.52	5.13	Silty Loam	0.39
TN014	30.00	C	1.30	5.12	Silty Loam	0.47

**Table 4-139. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030603.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Carroll	27,514	28,990	29,475	0.11	29	31	32	10.30
Gibson	46,315	48,083	48,152	8.51	3,943	4,094	4,100	4.00
<b>Total</b>	<b>73,829</b>	<b>77,073</b>	<b>77,627</b>		<b>3,972</b>	<b>4,125</b>	<b>4,132</b>	<b>4.00</b>

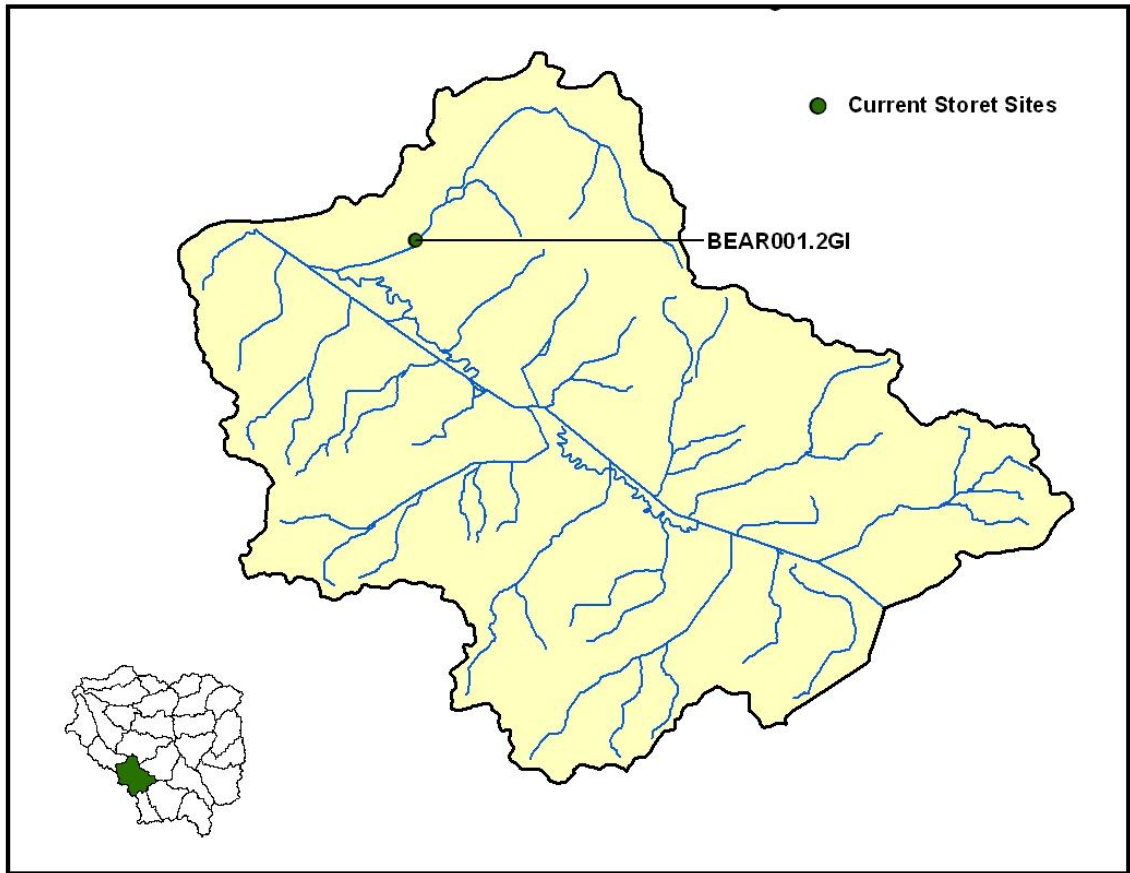
*Table 4-140. Population Estimates in Subwatershed 080102030603.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Milan	Gibson	7,512	3,300	3,183	110	7
Atwood	Carroll	1,080	454	417	36	1
<b>Total</b>		<b>8,592</b>	<b>3,754</b>	<b>3,600</b>	<b>146</b>	<b>8</b>

*Table 4-141. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030603.*

**4.2.U.ii. USGS Gaging Stations and STORET Sites.**

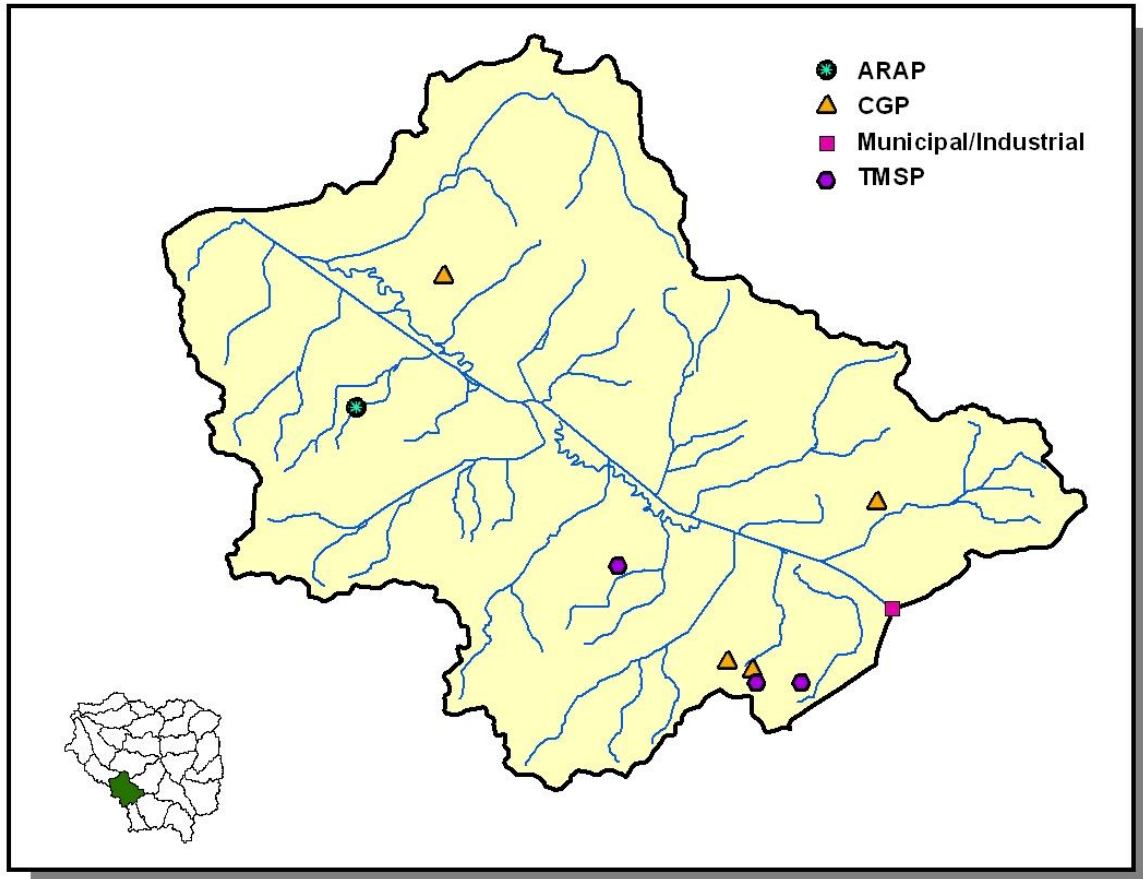
There are no USGS continuous record gaging stations located in subwatershed 080102030603.



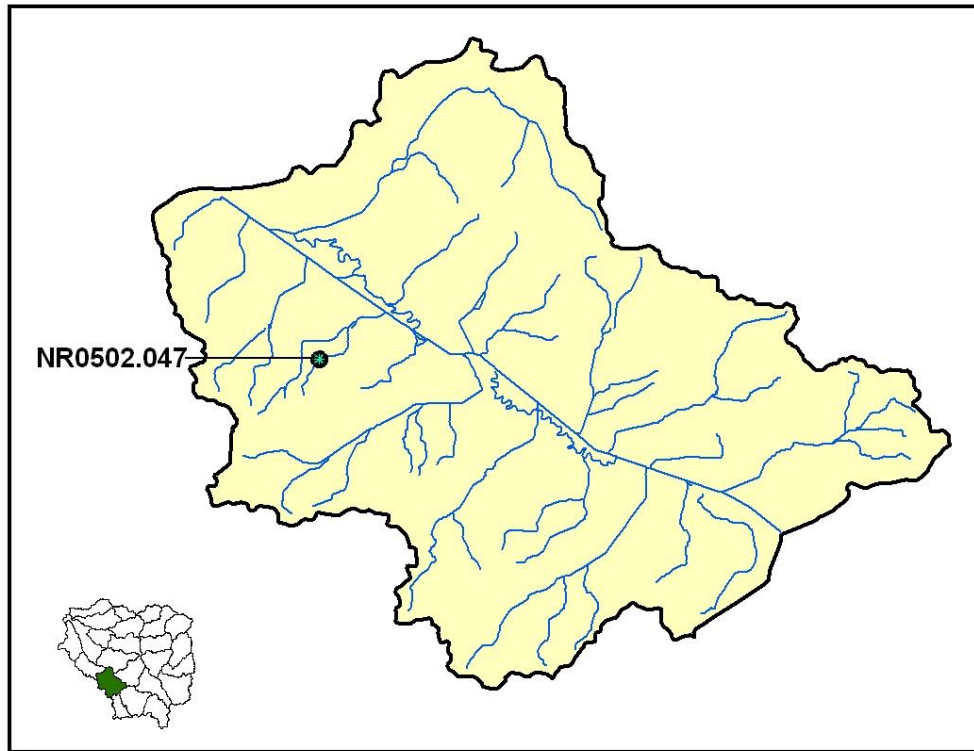
**Figure 4-217. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030603.** More information, including site names and locations, is provided in Appendix IV.



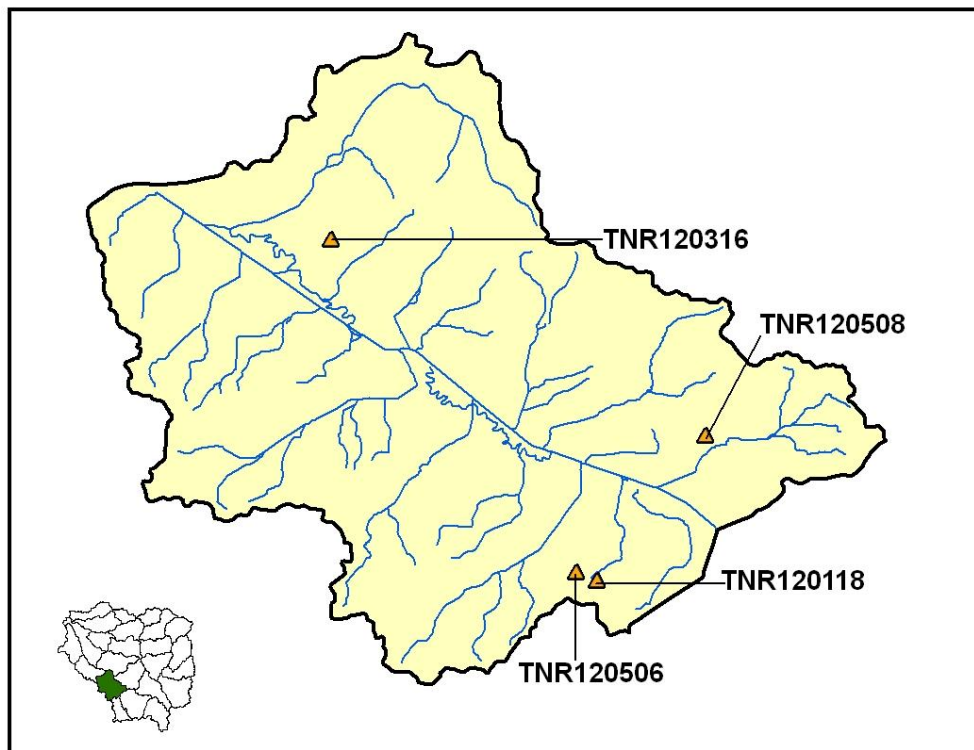
**4.2.U.iii. Permitted Activities.**



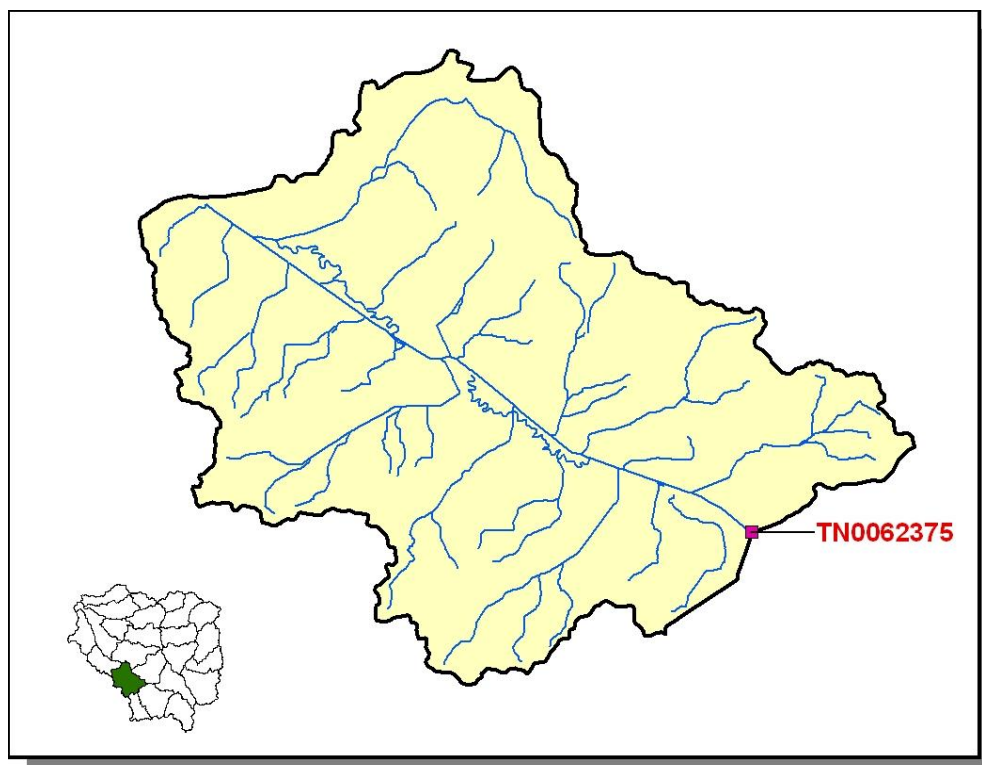
**Figure 4-218. Location of Permits Issued in Subwatershed 080102030603.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-219. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030603.** More information is provided in Appendix IV.



**Figure 4-220. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030603.** More information is provided in Appendix IV.



**Figure 4-221. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030603.** Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the name of the facility is provided in Appendix IV.

PERMIT #	7Q10	DISCHARGE FLOW
TN0062375	7.75	2.55

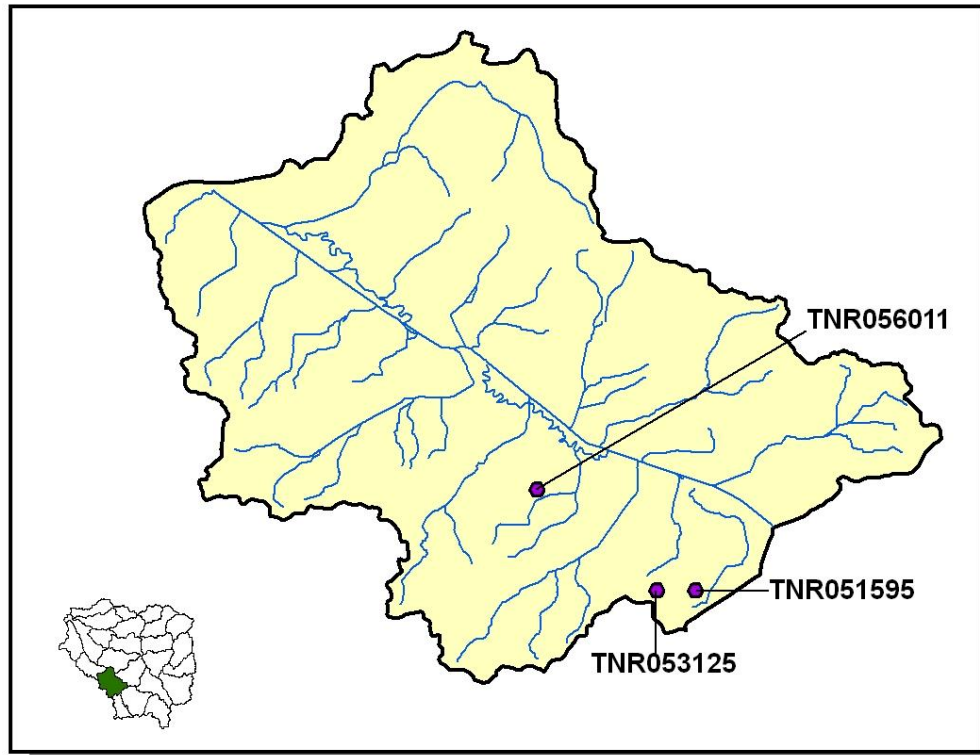
**Table 4-142. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030603.** Data are in million gallons per day (MGD). Data were obtained from permit files.

PERMIT #	CBOD <sub>5</sub>	CBOD % REMOVAL	AMMONIA AS N (TOTAL)	E. coli	Cu	Ag
TN0062375	X	X	X	X	X	X

**Table 4-143. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030603.** CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-day).

PERMIT #	WET	DO	TRC	FLOW	pH	TSS	TSS % REMOVAL	SS
TN0062375	X	X	X	X	X	X	X	X

**Table 4-144. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030603.** WET, Whole Effluent Toxicity; DO, Dissolved Oxygen; TRC, Total Residual Chlorine; TSS, Total Suspended Solids; SS, Settleable Solids.



**Figure 4-222. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030603.** More information is provided in Appendix IV.

**4.2.U.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	
Gibson	9,766	21,779	221	605	7,506	74

**Table 4-145. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0
Gibson	36.4	36.4	2.0	8.6

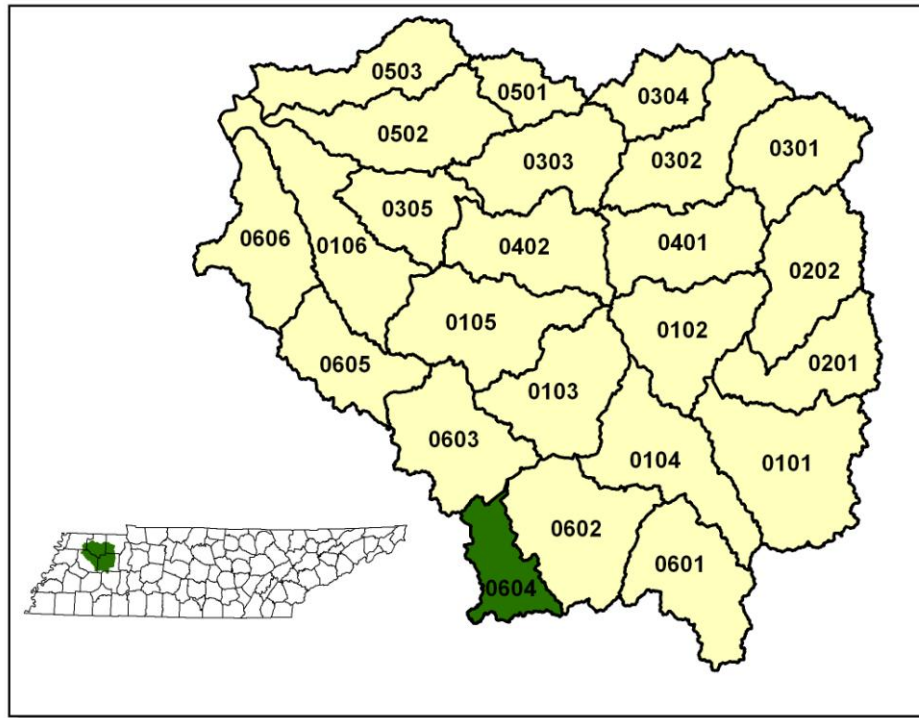
**Table 4-146. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Wheat (Close Grown Cropland)	18.50
Cotton (Row Crops)	17.09
Corn (Row Crops)	11.63
Soybeans (Row Crops)	8.61
Sorghum (Row Crops)	6.38
Other Land in Farms	1.33
Grass Forbs Legumes Mixed (Pastureland)	0.88
Other Cropland not Planted	0.68
Conservation Reserve Program Land	0.48
Legume Grass (Hayland)	0.46
Farmsteads and Ranch Headquarters	0.37
Grass (Hayland)	0.34
Grass (Pastureland)	0.28
Legume (Hayland)	0.07

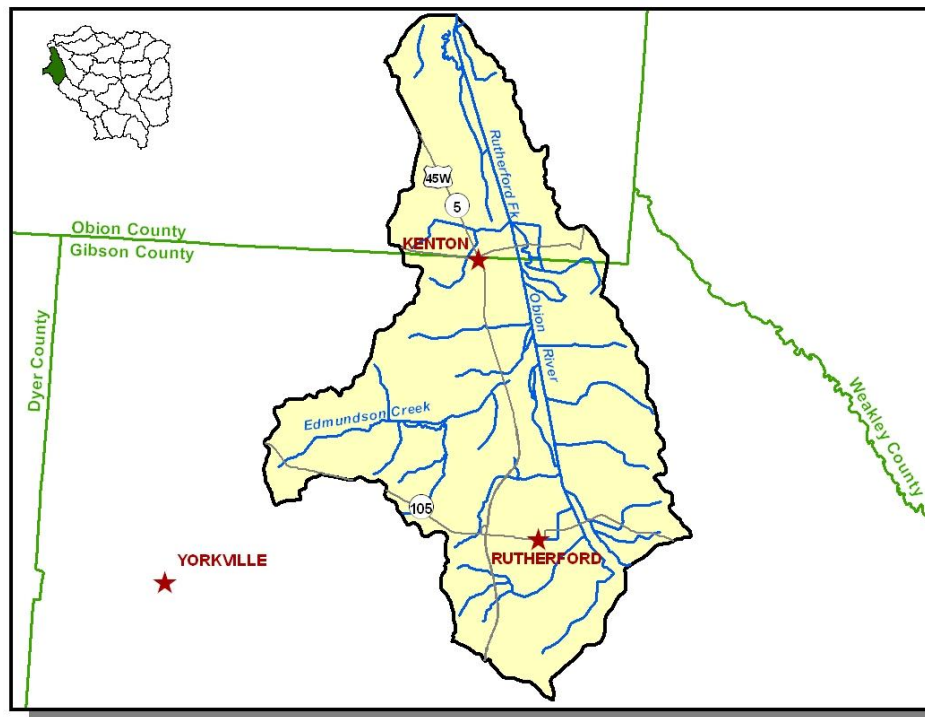
**Table 4-147. Annual Estimated Total Soil Loss in Subwatershed 080102030603.**

**4.2.V. 080102030604 (Wolf Creek).**

**4.2.V.i. General Description.**

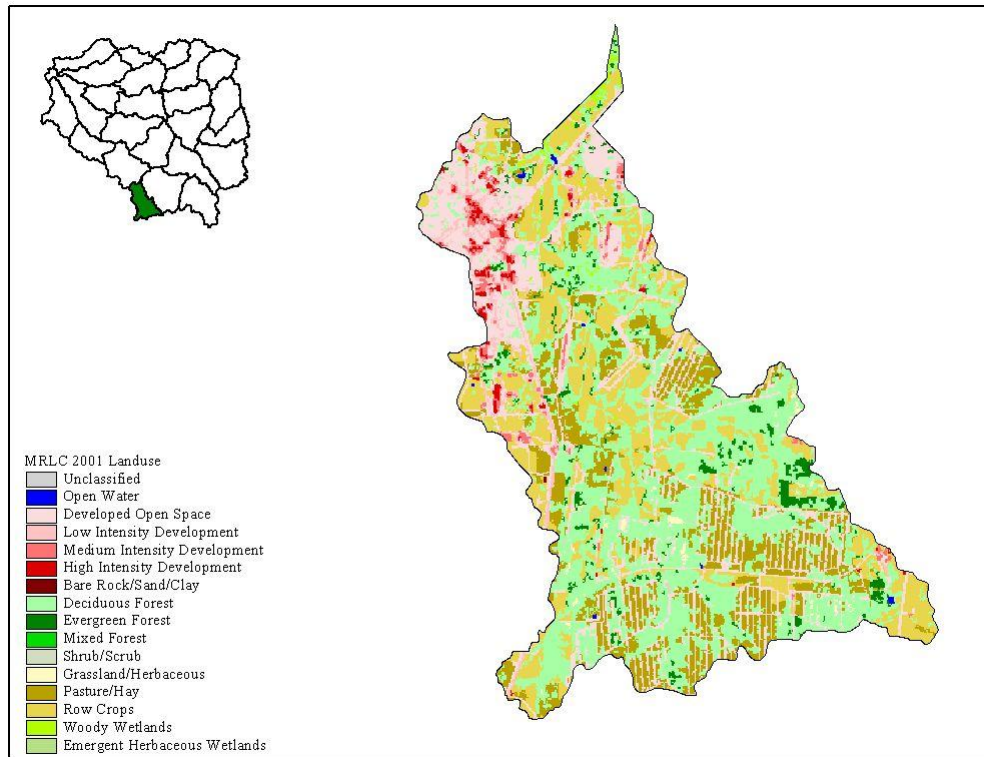


**Figure 4-223. Location of Subwatershed 080102030604.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.

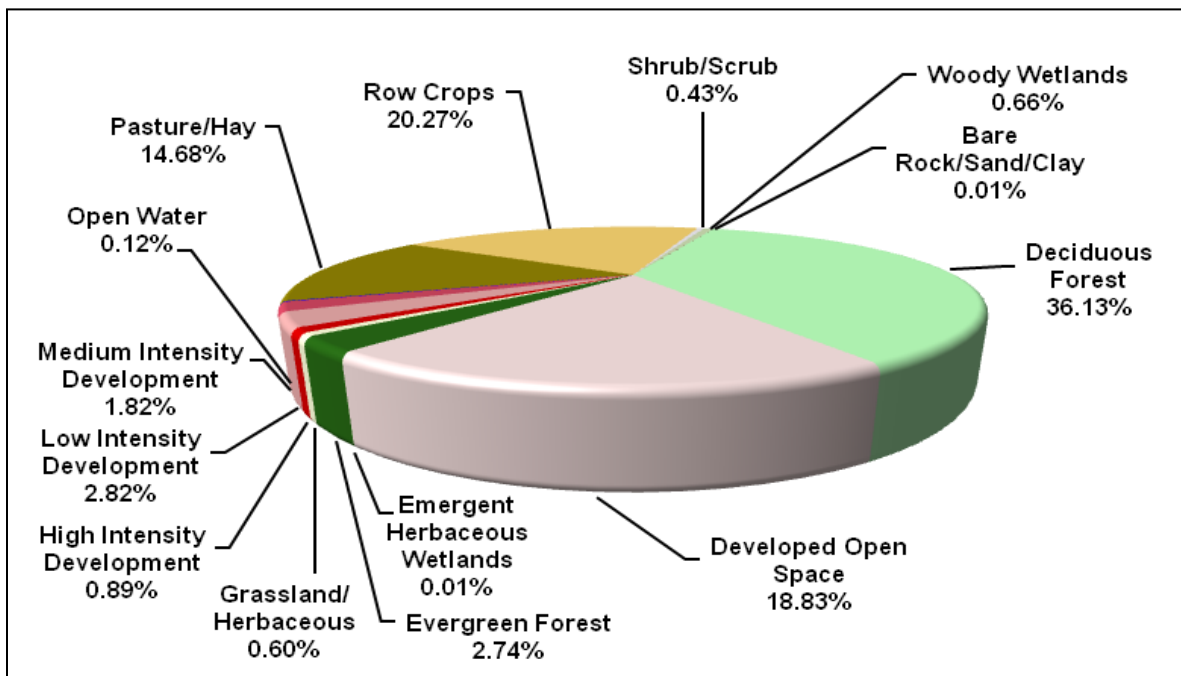


**Figure 4-224. Locational Details of Subwatershed 080102030604.**

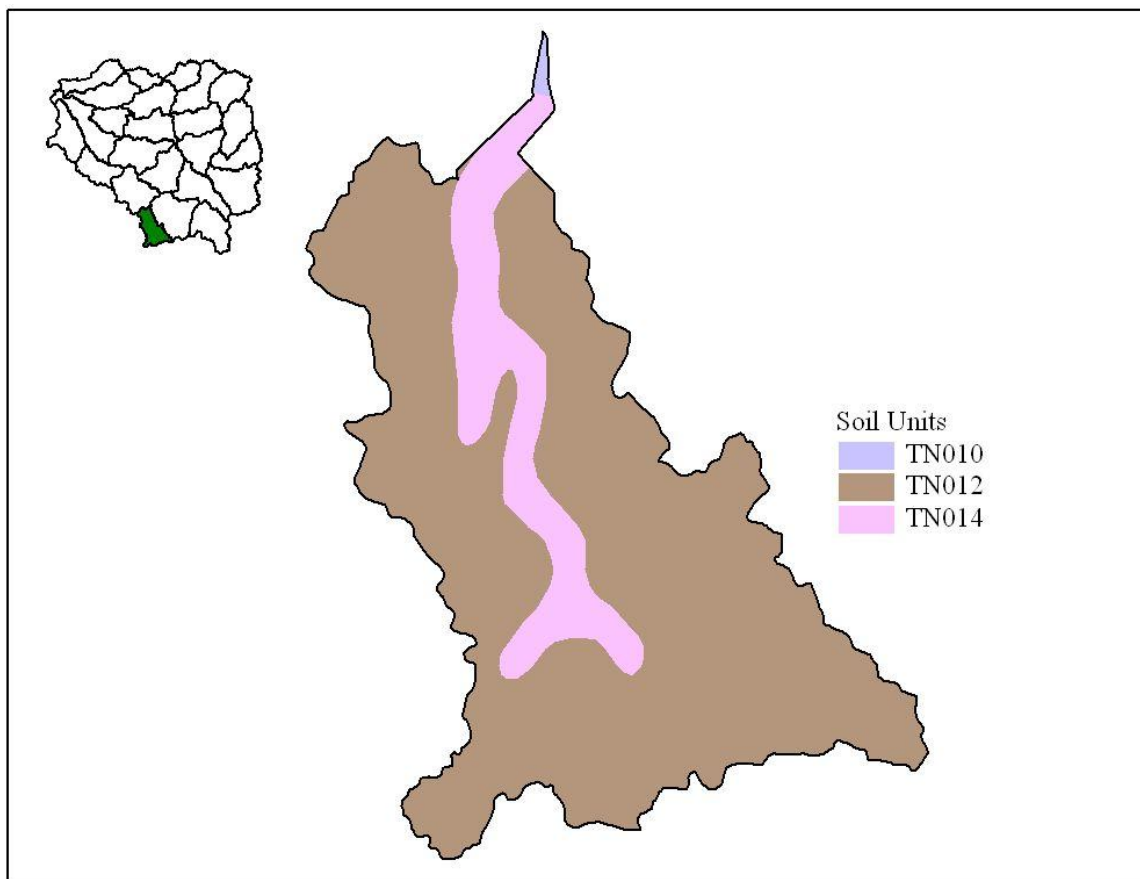




**Figure 4-225. Illustration of Land Use Distribution in Subwatershed 080102030604.**



**Figure 4-226. Land Use Distribution in Subwatershed 080102030604.** More information is provided in Appendix IV.



**Figure 4-227. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030604.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN012	1.00	C	2.52	5.13	Silty Loam	0.39
TN014	30.00	C	1.30	5.12	Silty Loam	0.47

**Table 4-148. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030604.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Carroll	27,514	28,990	29,475	0.96	264	278	283	7.20
Gibson	46,315	48,083	48,152	3.50	1,621	1,683	1,686	4.00
<b>Total</b>	<b>73,829</b>	<b>77,073</b>	<b>77,627</b>		<b>1,885</b>	<b>1,961</b>	<b>1,969</b>	<b>4.50</b>

**Table 4-149. Population Estimates in Subwatershed 080102030604.**

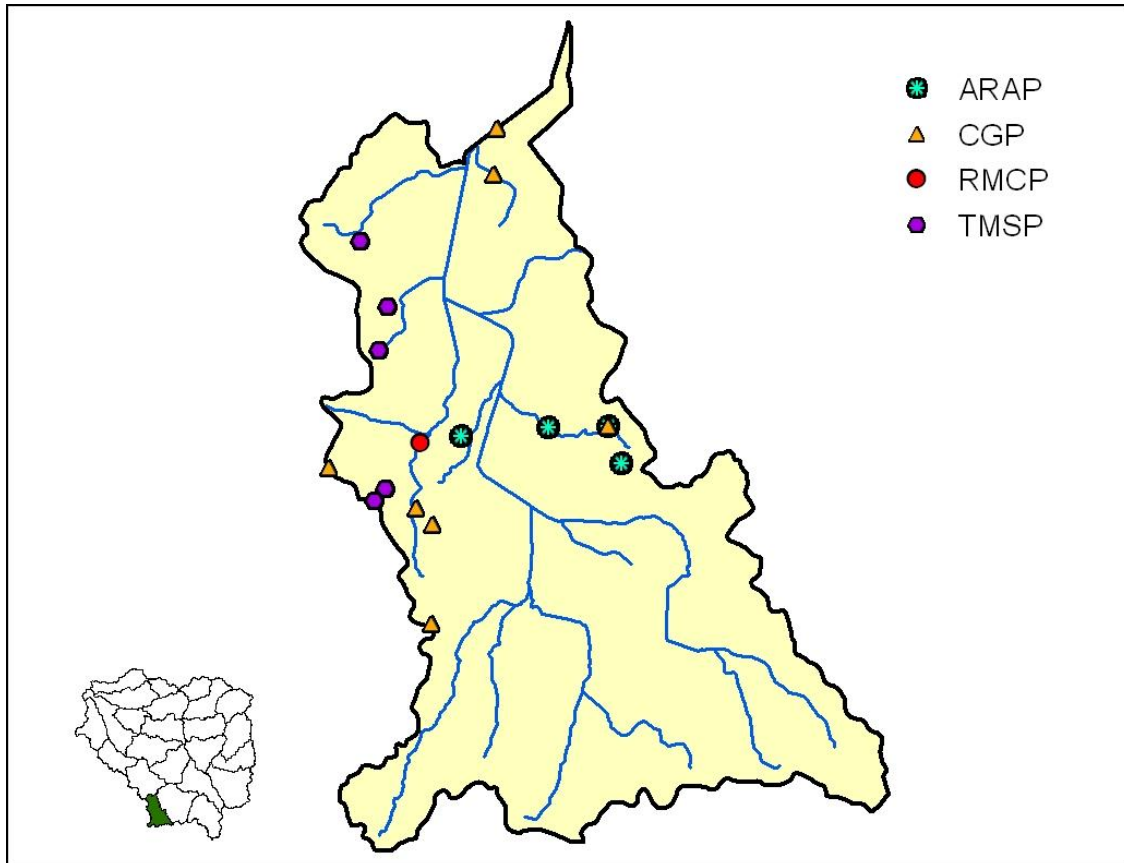
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Milan	Gibson	7,512	3,300	3,183	110	7

**Table 4-150. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030604.**

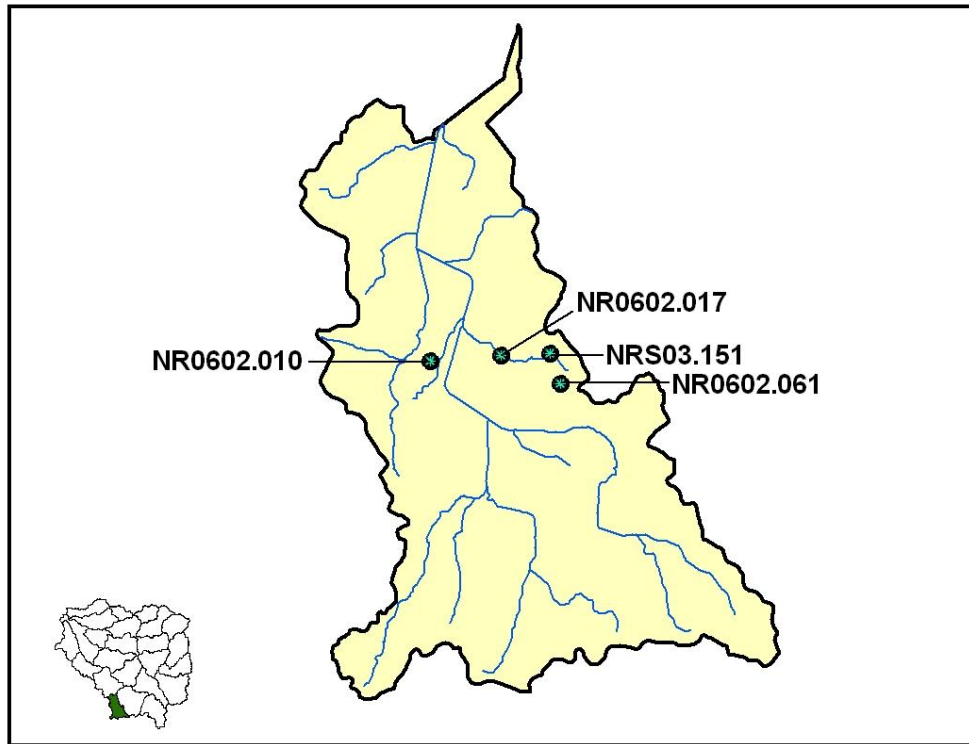
#### 4.2.V.ii. USGS Gaging Stations and STORET Sites.

There are no USGS continuous record gaging stations or STORET sites located in subwatershed 080102030604.

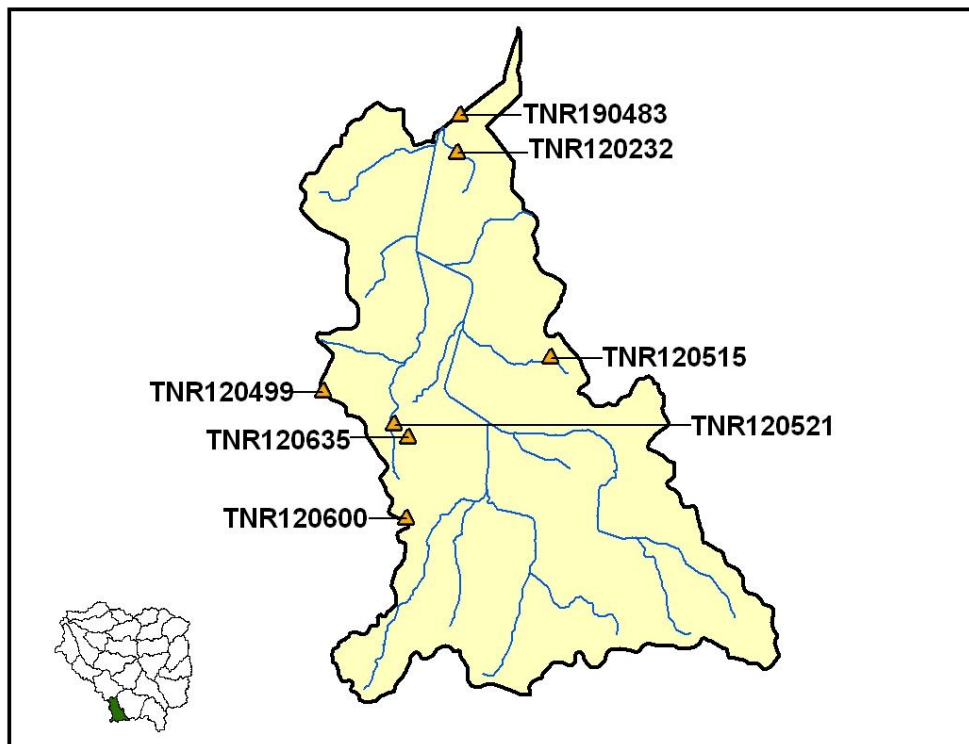
#### 4.2.V.iii. Permitted Activities.



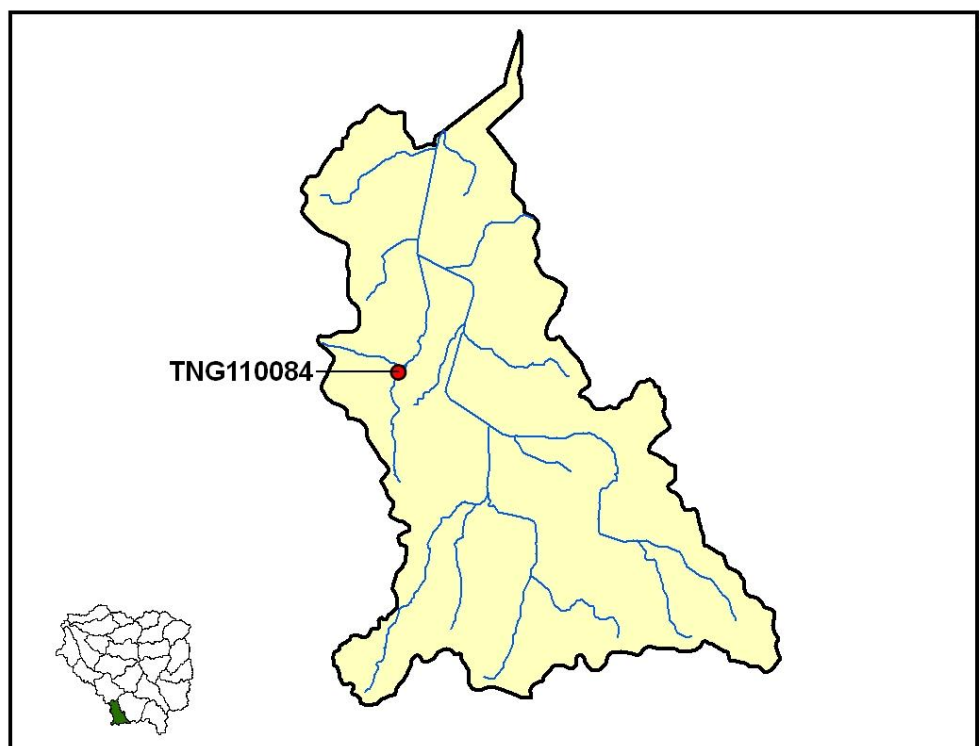
**Figure 4-228. Location of Permits Issued in Subwatershed 080102030604.** More information, including the names of facilities, is provided in Appendix IV.



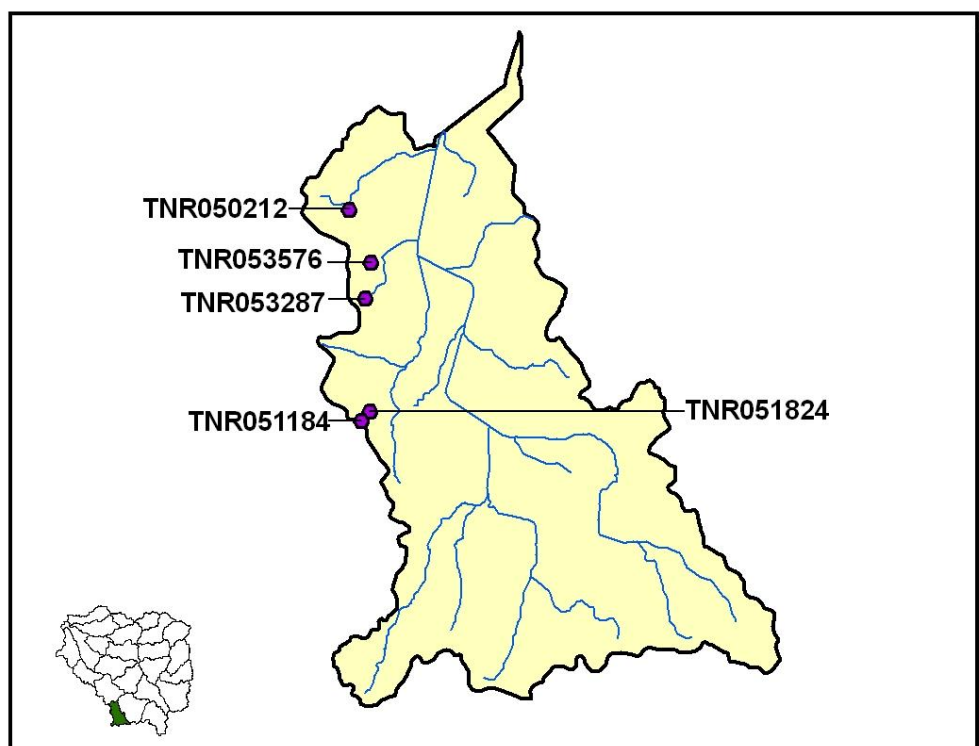
**Figure 4-229. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030604.** More information is provided in Appendix IV.



**Figure 4-230. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030604.** More information is provided in Appendix IV.



**Figure 4-231. Location of RMCP (Ready Mix Concrete Plant) facilities in Subwatershed 080102030604.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-232. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030604.** More information is provided in Appendix IV.



**4.2.V.iv. Nonpoint Source Contributions.**

<b>LIVESTOCK COUNTS</b>						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Carroll	9,636	17,433	272	673	4,949	
Gibson	9,766	21,779	221	605	7,506	74

**Table 4-151. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Carroll	169.1	169.1	0.6	2.0
Gibson	36.4	36.4	2.0	8.6

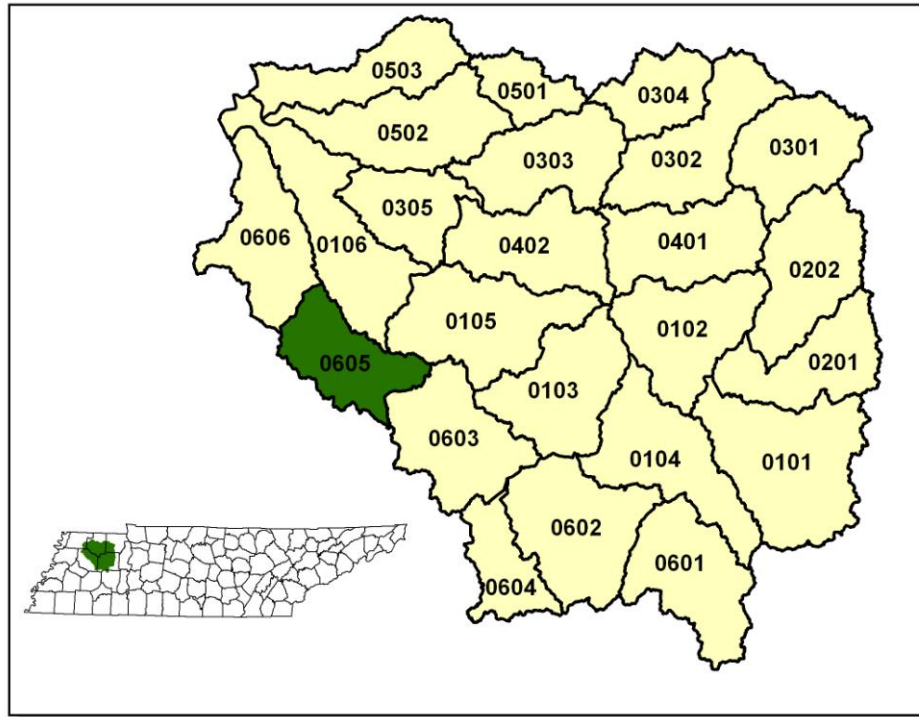
**Table 4-152. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Wheat (Close Grown Cropland)	18.50
Cotton (Row Crops)	15.14
Corn (Row Crops)	10.47
Soybeans (Row Crops)	8.93
Sorghum (Row Crops)	6.38
Other Cropland not Planted	2.49
Other Land in Farms	1.17
Grass Forbs Legumes Mixed (Pastureland)	0.82
Conservation Reserve Program Land	0.63
Farmsteads and Ranch Headquarters	0.53
Legume Grass (Hayland)	0.46
Grass (Hayland)	0.32
Grass (Pastureland)	0.30
Legume (Hayland)	0.07

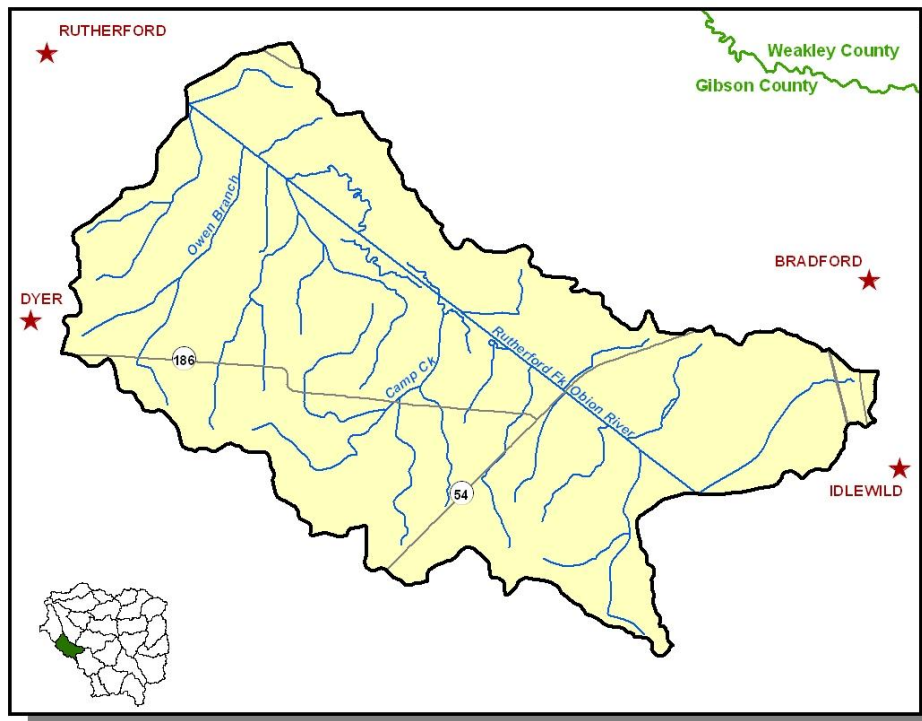
**Table 4-153. Annual Estimated Total Soil Loss in Subwatershed 080102030604.**

**4.2.W. 080102030605 (Rutherford Fork Obion River).**

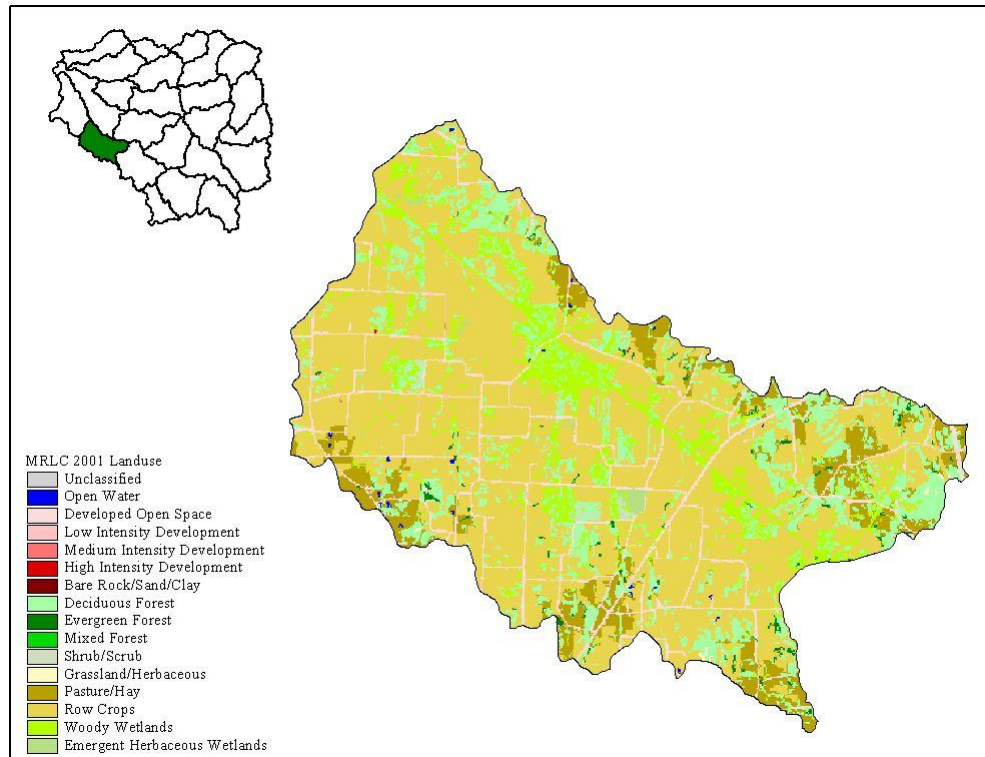
**4.2.W.i. General Description.**



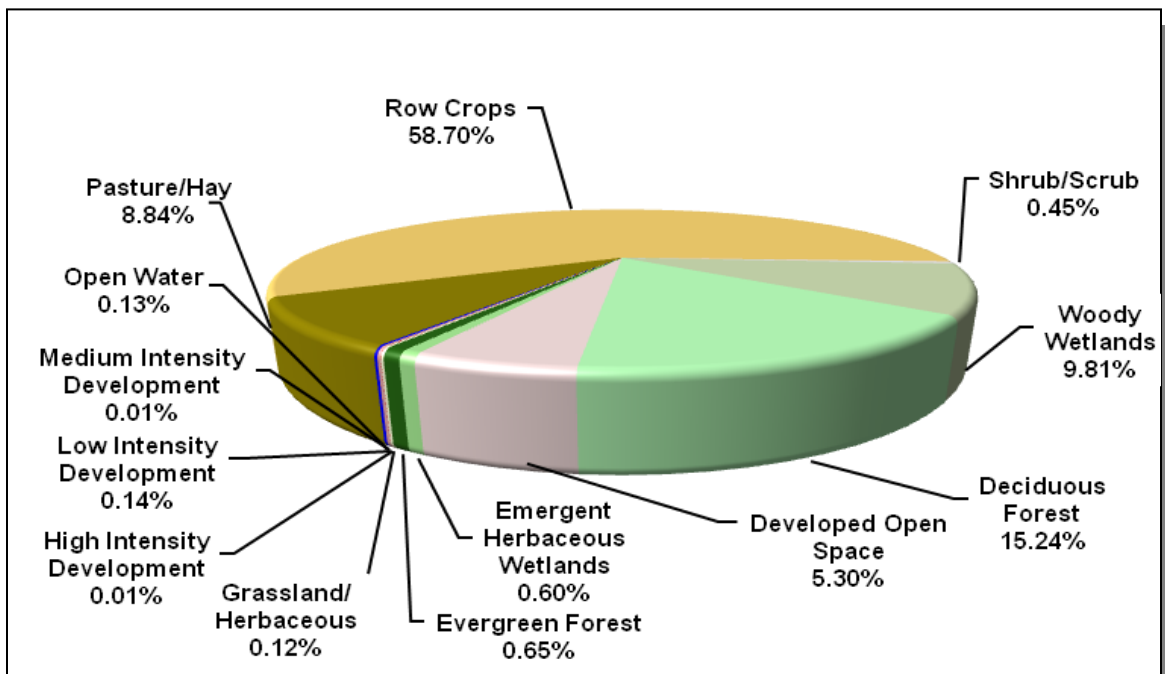
**Figure 4-233. Location of Subwatershed 080102030605.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



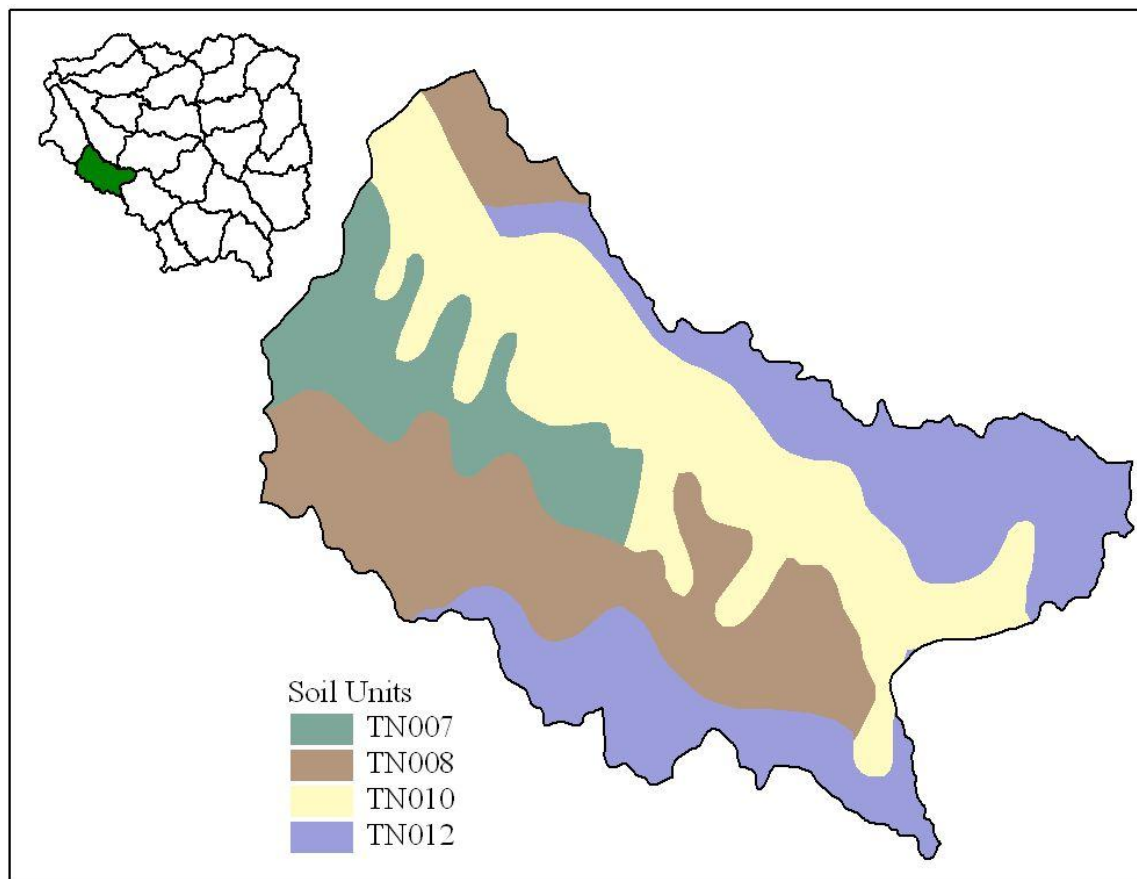
**Figure 4-234. Locational Details of Subwatershed 080102030605.**



**Figure 4-235. Illustration of Land Use Distribution in Subwatershed 080102030605.**



**Figure 4-236. Land Use Distribution in Subwatershed 080102030605.** More information is provided in Appendix IV.



**Figure 4-237. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030605.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44
TN012	1.00	C	2.52	5.13	Silty Loam	0.39

**Table 4-154. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030605.** The definition of "Hydrologic Group" is provided in Appendix IV.

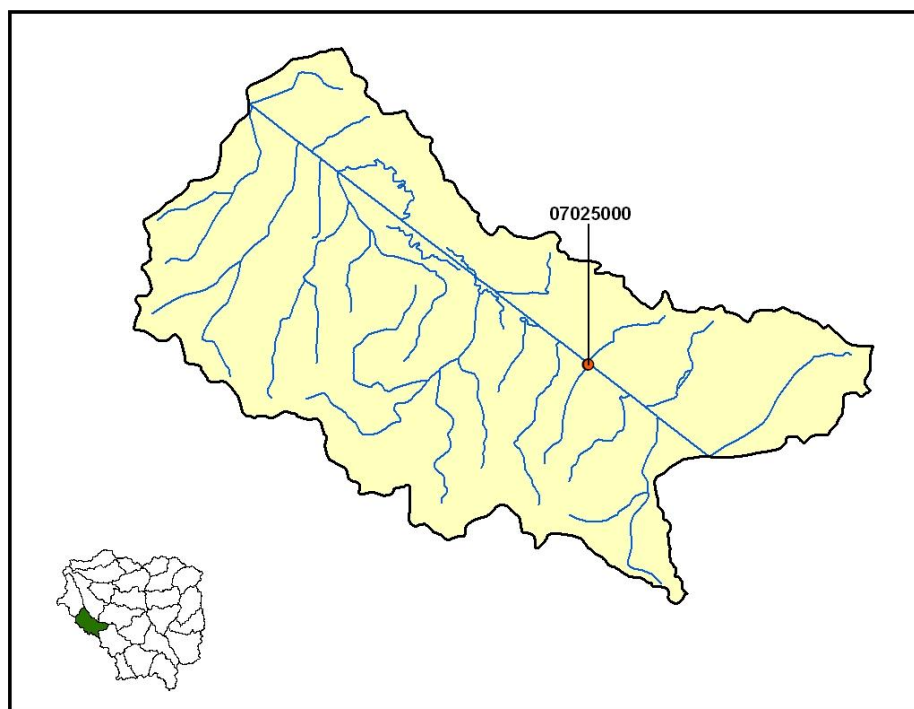
County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Gibson	46,315	48,083	48,152	6.5	3,009	3,124	3,129	4.0

**Table 4-155. Population Estimates in Subwatershed 080102030605.**

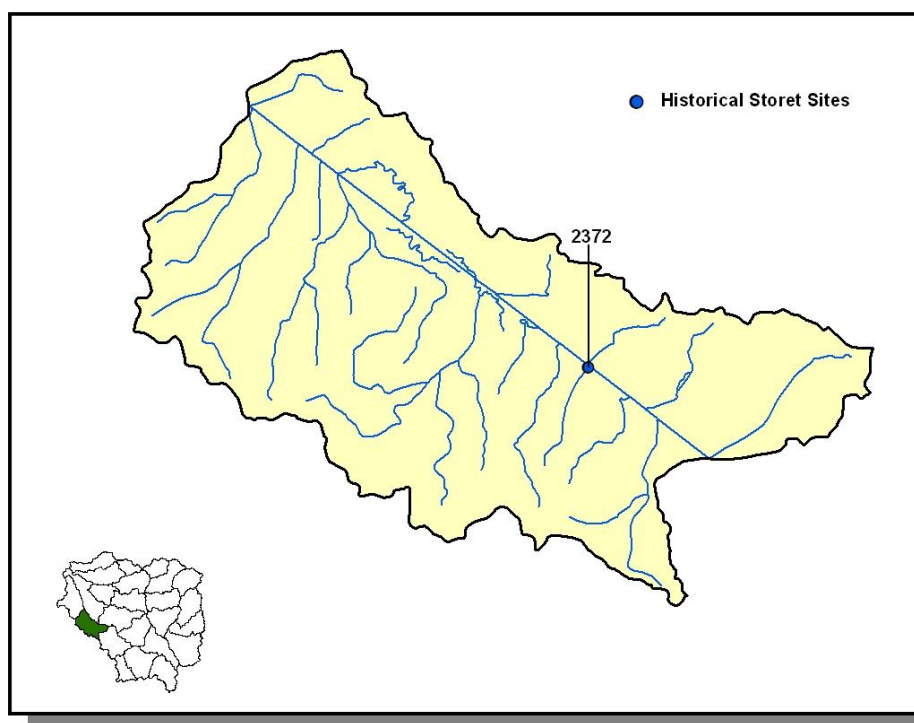
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Bradford	Gibson	1,154	503	480	23	0
Dyer	Gibson	2,190	972	932	40	0
<b>Total</b>		<b>3,344</b>	<b>1,475</b>	<b>1,412</b>	<b>63</b>	<b>0</b>

**Table 4-156. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030605.**

**4.2.W.ii. USGS Gaging Stations and STORET Sites.**



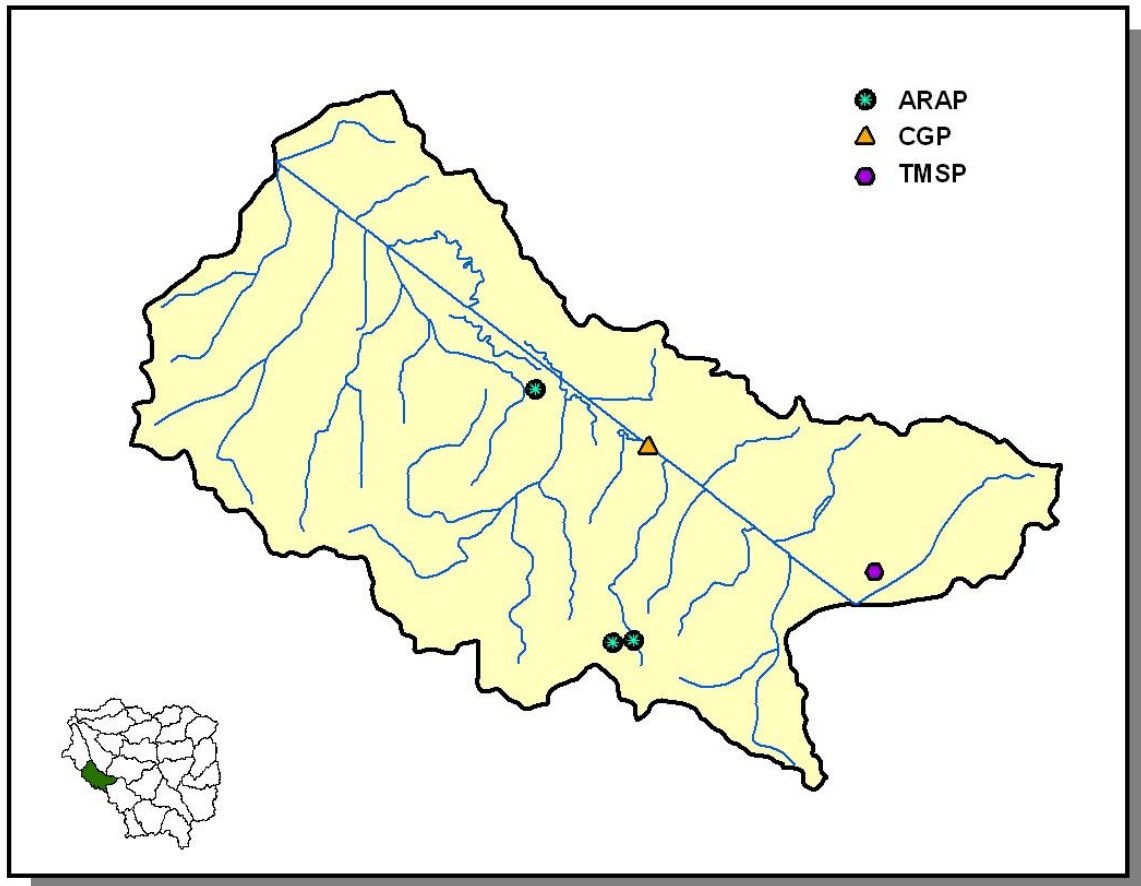
**Figure 4-238. Location of USGS Continuous Record Gaging Stations in Subwatershed 080102030605.** More information is provided in Appendix IV.



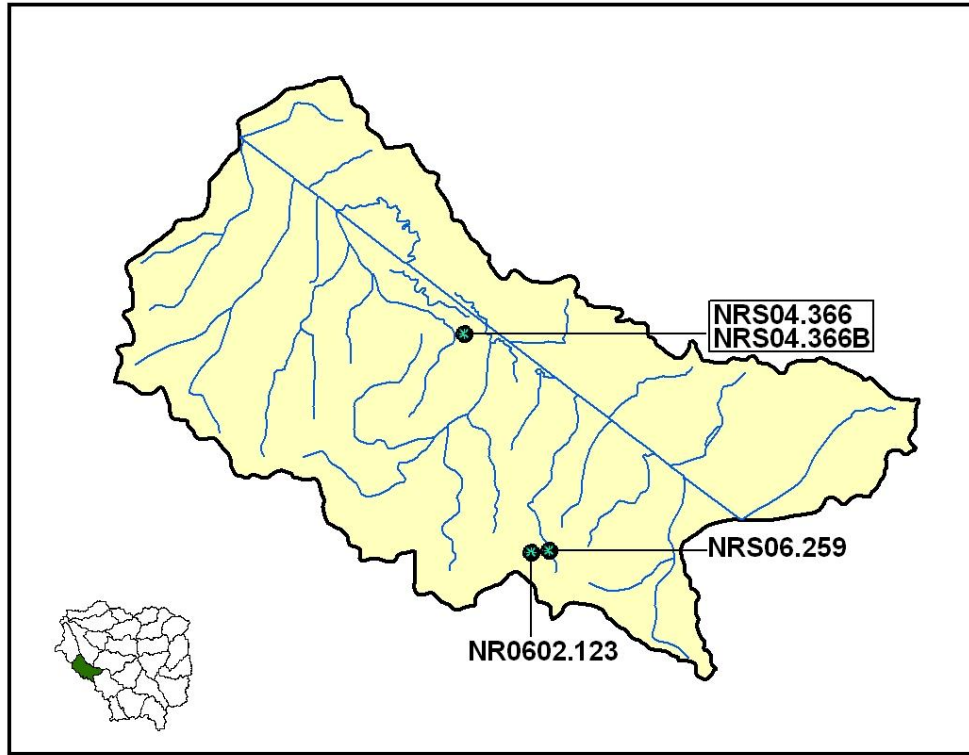
**Figure 4-239. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030605.** More information, including site names and locations, is provided in Appendix IV.



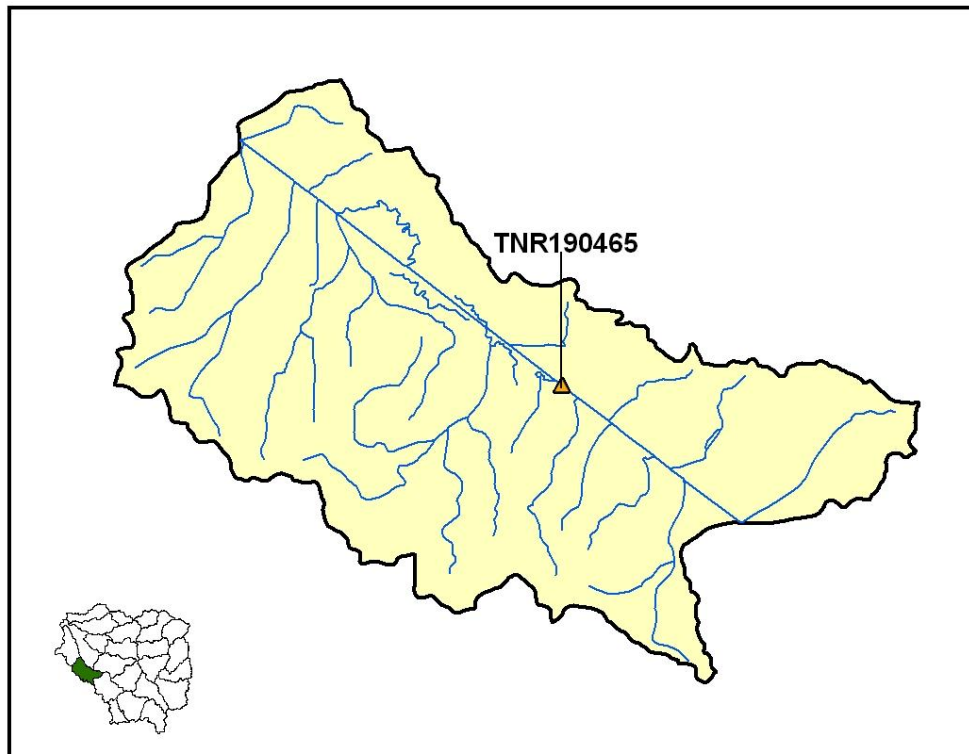
**4.2.W.iii. Permitted Activities.**



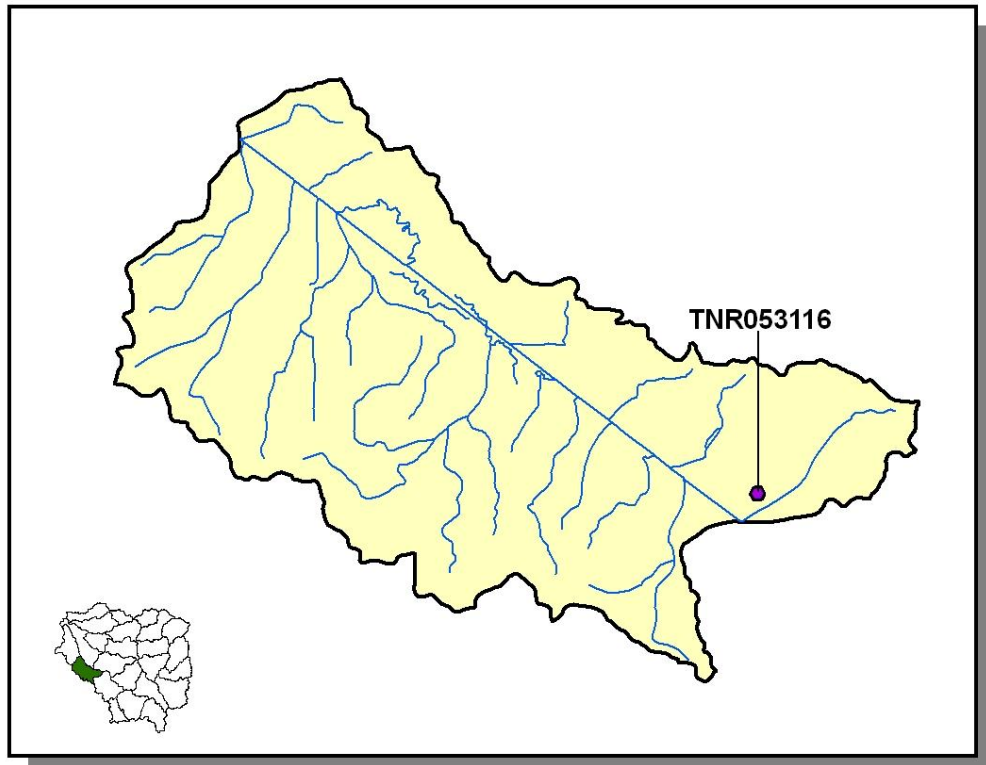
**Figure 4-240. Location of Permits Issued in Subwatershed 080102030605.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-241. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030605.** More information is provided in Appendix IV.



**Figure 4-242. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030605.** More information is provided in Appendix IV.



**Figure 4-243. Location of TMSPT (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030605.** More information is provided in Appendix IV.

**4.2.W.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Gibson	9,766	21,779	221	605	7,506	74

**Table 4-157. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Gibson	36.4	36.4	2.0	8.6

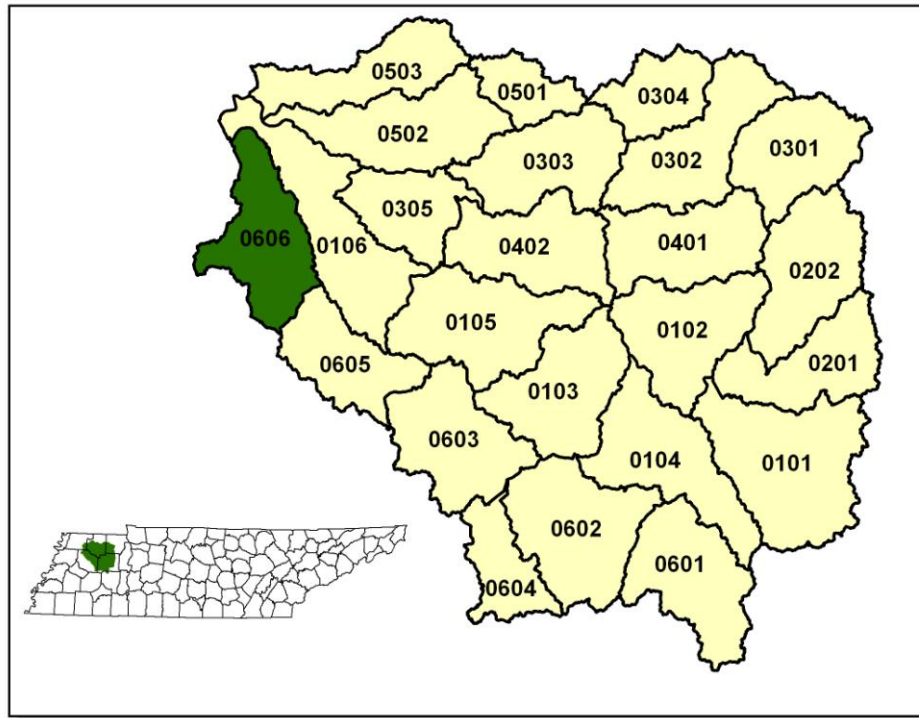
**Table 4-158. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Cotton (Row Crops)	17.21
Corn (Row Crops)	11.70
Soybeans (Row Crops)	8.59
Sorghum (Row Crops)	6.38
Other Land in Farms	1.34
Grass Forbs Legumes Mixed (Pastureland)	0.88
Other Cropland not Planted	0.57
Conservation Reserve Program Land	0.47
Farmsteads and Ranch Headquarters	0.36
Grass (Hayland)	0.34
Grass (Pastureland)	0.28

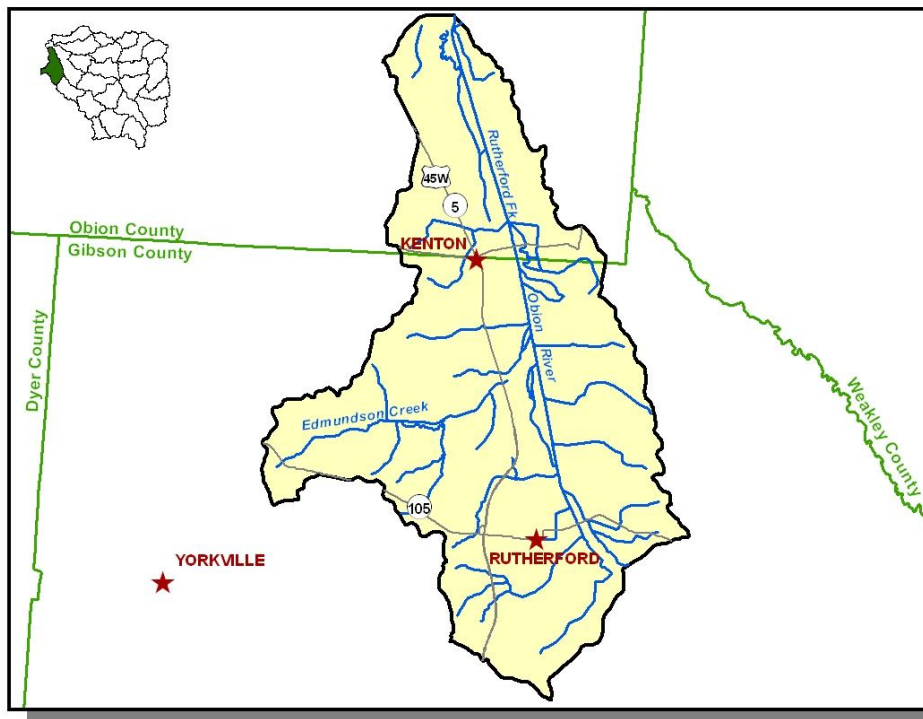
**Table 4-159. Annual Estimated Total Soil Loss in Subwatershed 080102030605.**

#### 4.2.X. 080102030606 (Rutherford Fork Obion River).

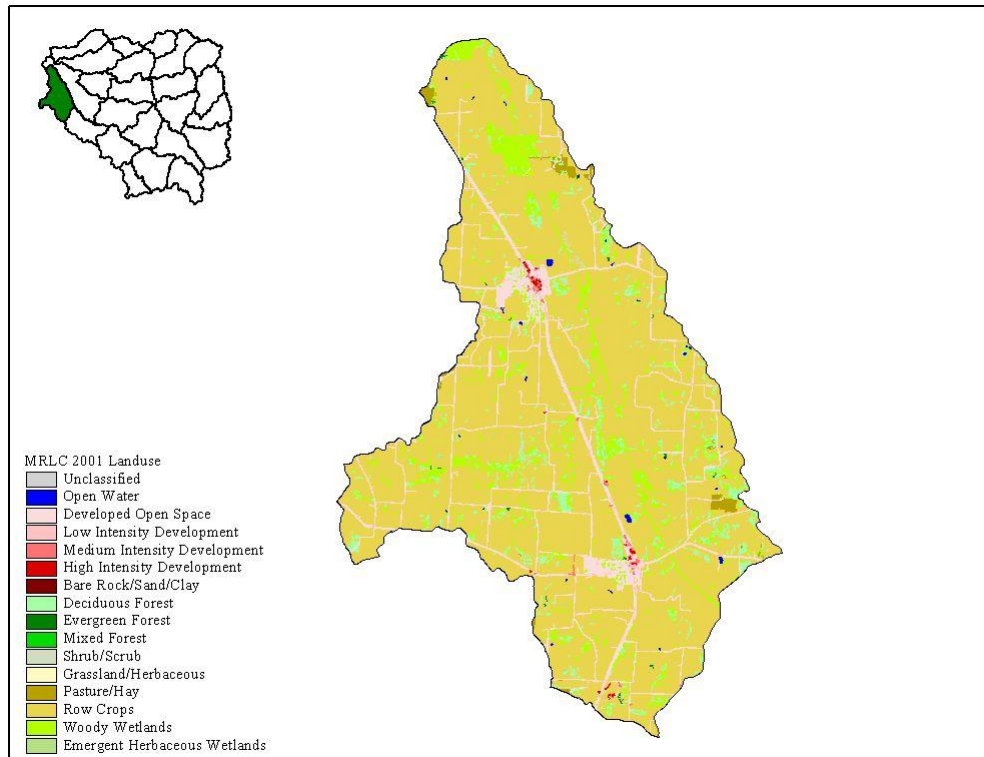
##### 4.2.X.i. General Description.



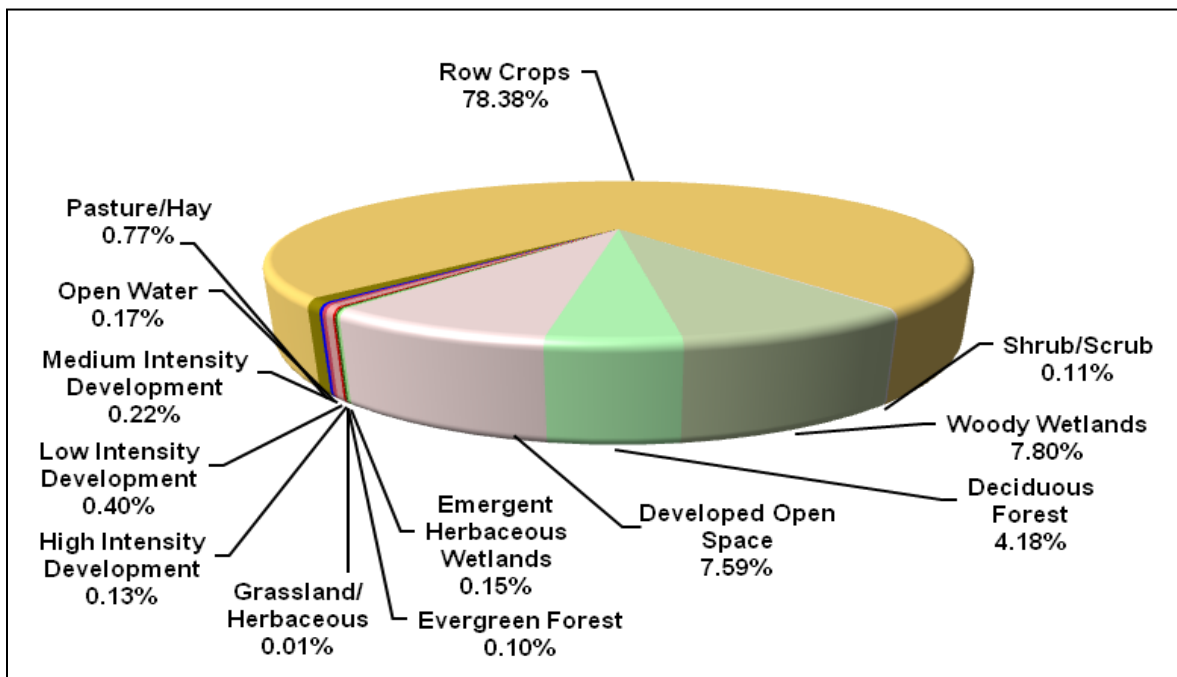
**Figure 4-244. Location of Subwatershed 080102030606.** All South Fork Obion River HUC-12 subwatershed boundaries are shown for reference.



**Figure 4-245. Locational Details of Subwatershed 080102030606.**

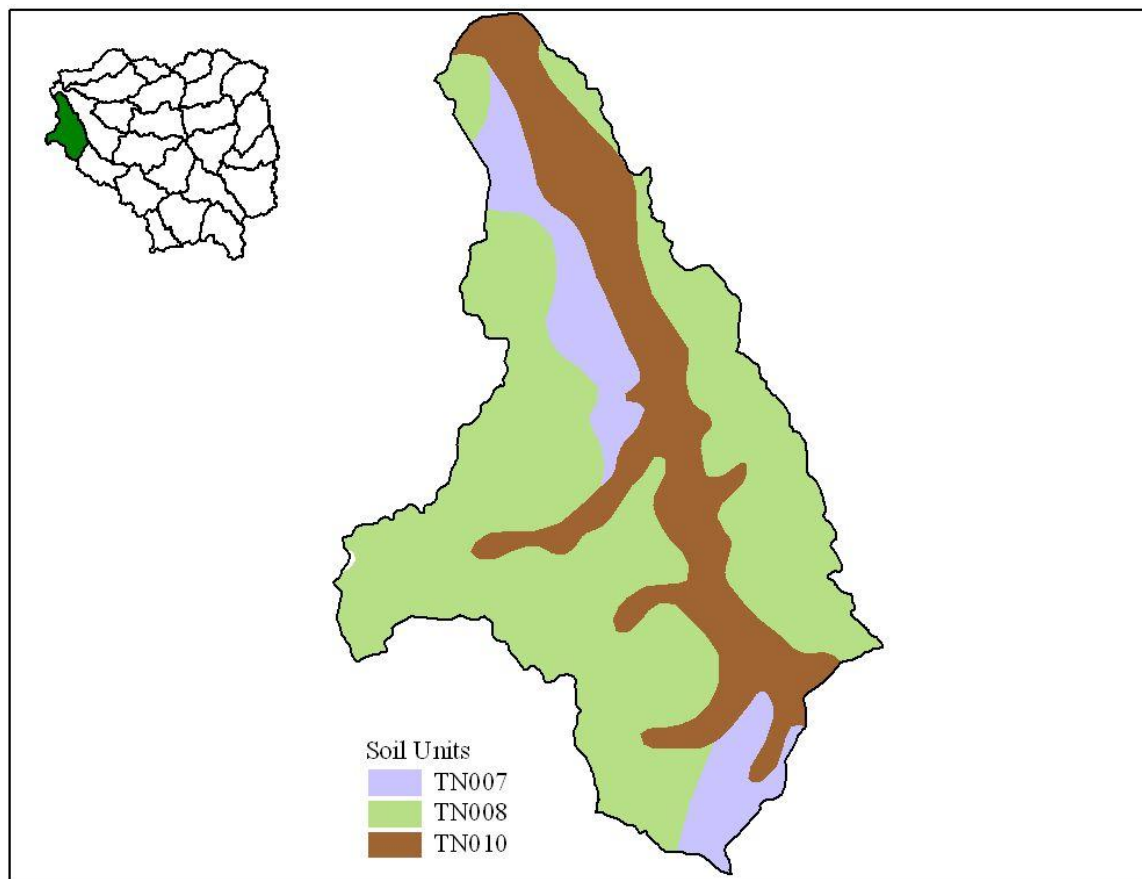


**Figure 4-246. Illustration of Land Use Distribution in Subwatershed 080102030606.**



**Figure 4-247. Land Use Distribution in Subwatershed 080102030606.** More information is provided in Appendix IV.





**Figure 4-248. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030606.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN007	29.00	C	1.30	5.36	Silty Loam	0.48
TN008	2.00	C	1.38	5.20	Silty Loam	0.48
TN010	81.00	C	1.33	5.11	Silty Loam	0.44

**Table 4-160. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 080102030606.** The definition of "Hydrologic Group" is provided in Appendix IV.

County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Gibson	46,315	48,083	48,152	6.21	2,876	2,986	2,990	4.00
Obion	31,717	32,069	32,450	1.96	622	628	636	2.30
<b>Total</b>	<b>78,032</b>	<b>80,152</b>	<b>80,602</b>		<b>3,498</b>	<b>3,614</b>	<b>3,626</b>	<b>3.70</b>

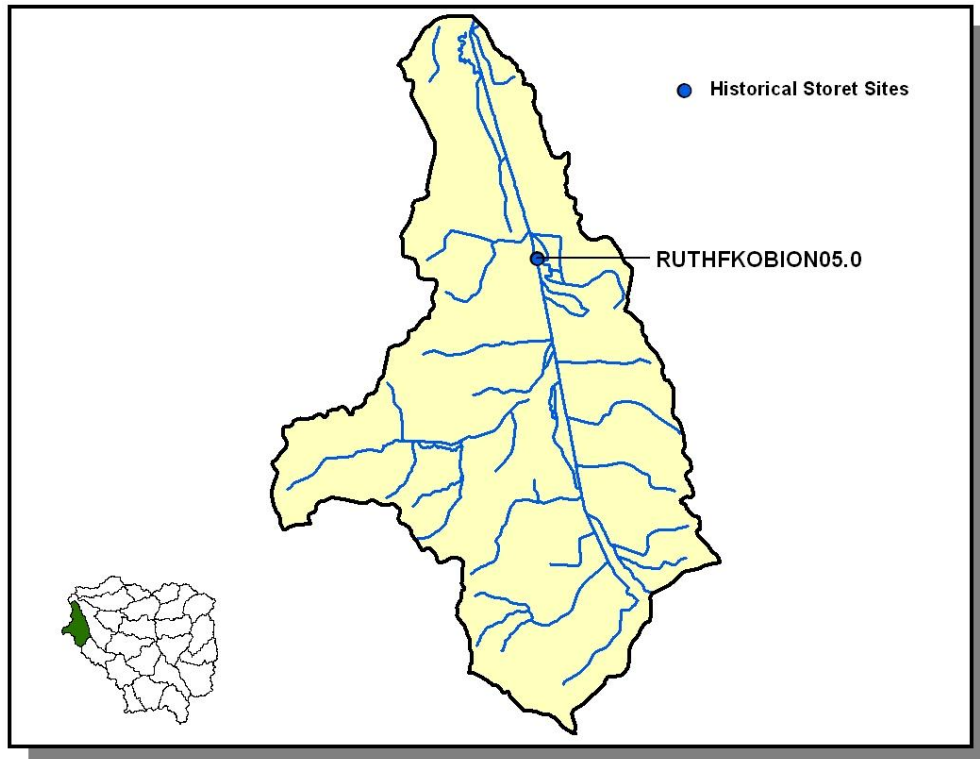
*Table 4-161. Population Estimates in Subwatershed 080102030606.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Kenton	Obion	1,403	623	609	14	0
Dyer	Gibson	2,190	972	932	40	0
Rutherford	Gibson	1,280	576	555	21	0
<b>Total</b>		<b>4,873</b>	<b>2,171</b>	<b>2,096</b>	<b>75</b>	<b>0</b>

*Table 4-162. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 080102030606.*

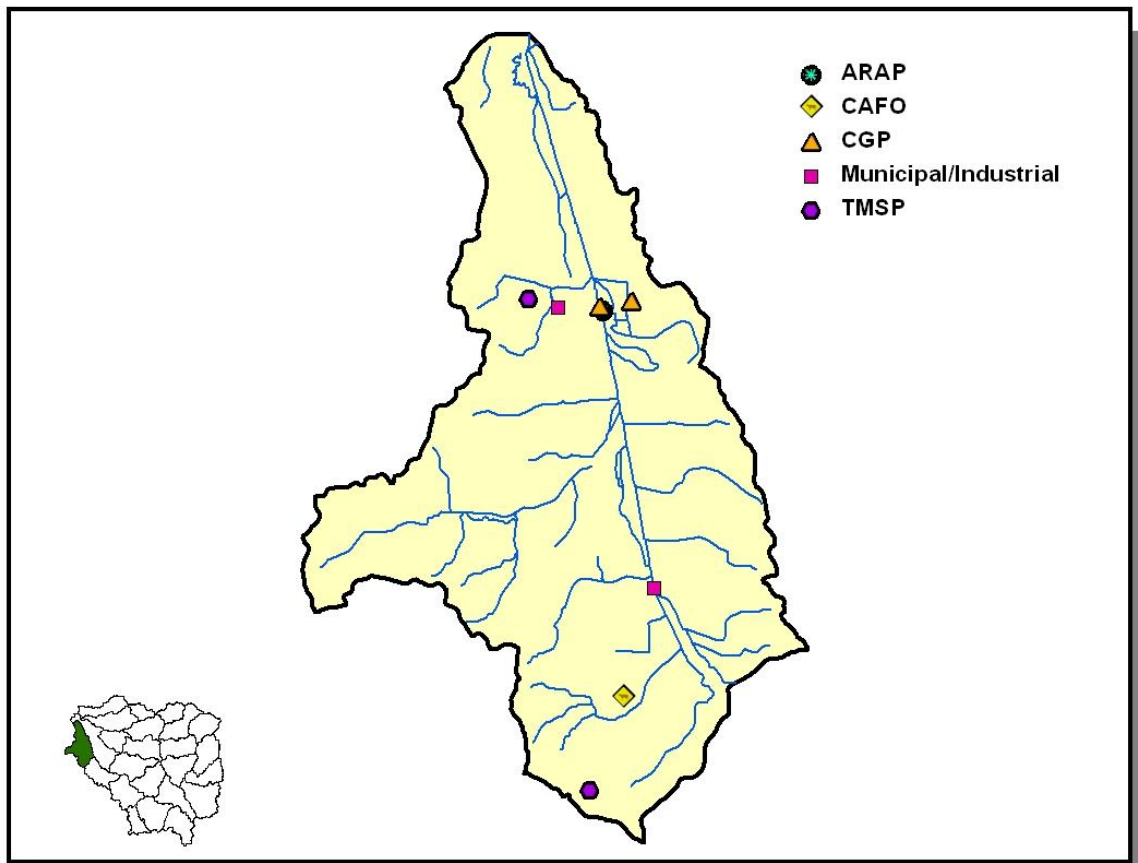
**4.2.X.ii. USGS Gaging Stations and STORET Sites.**

There are no USGS continuous record gaging stations located in subwatershed 080102030606.

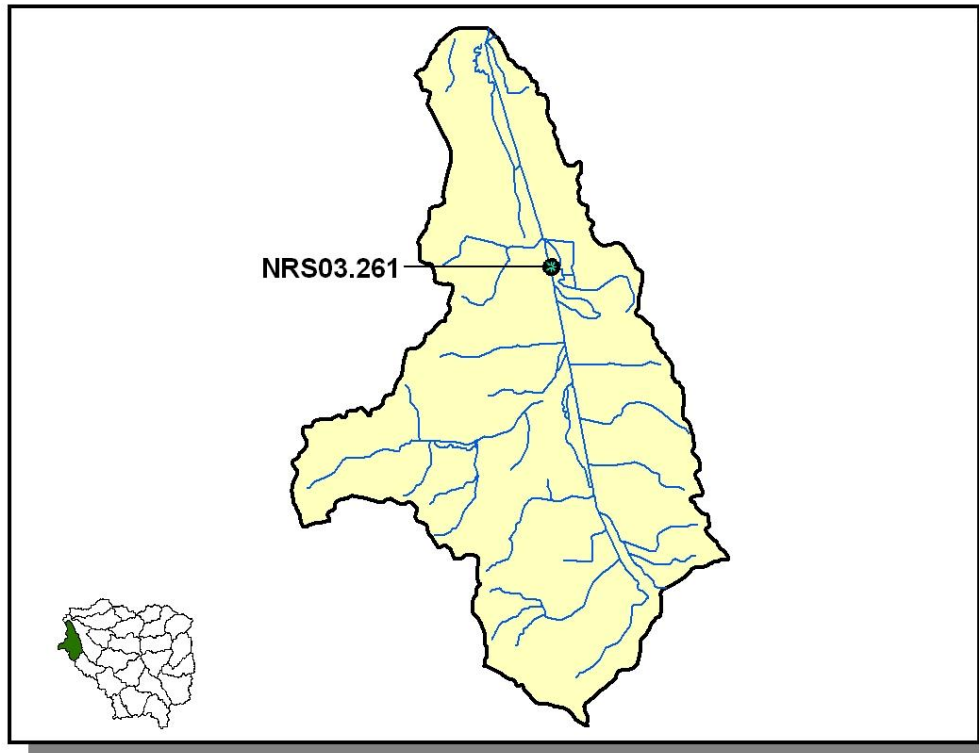


**Figure 4-249. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 080102030606.** More information, including site names and locations, is provided in Appendix IV.

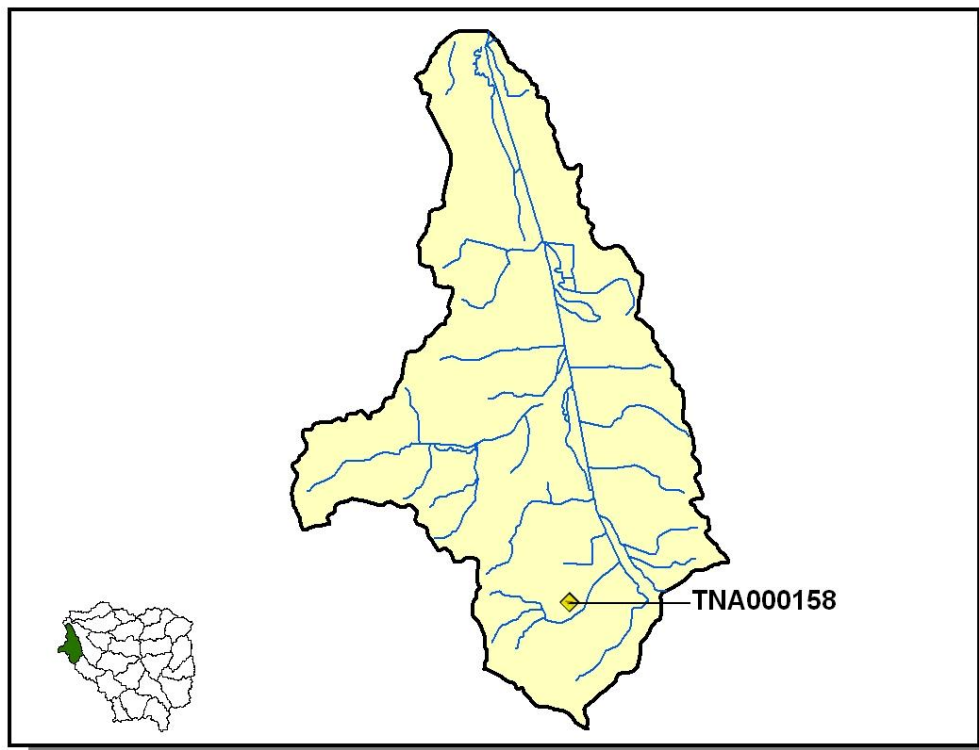
**4.2.X.iii. Permitted Activities.**



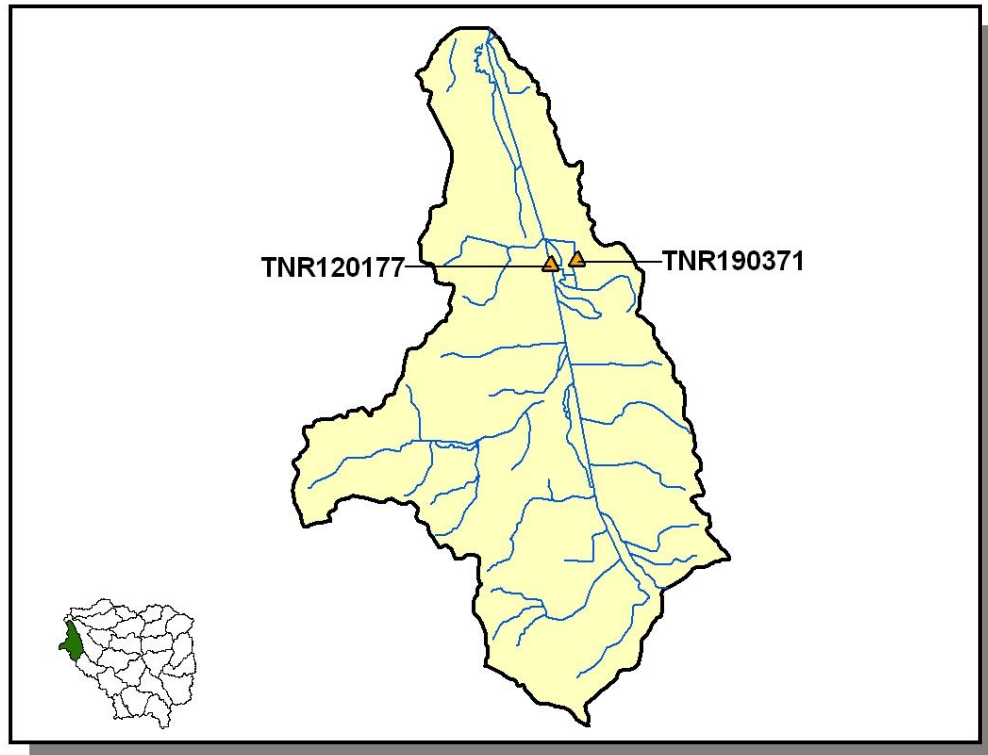
**Figure 4-250. Location of Permits Issued in Subwatershed 080102030606.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-251. Location of ARAP (Aquatic Resource Alteration Permit) Sites in Subwatershed 080102030606.** More information is provided in Appendix IV.

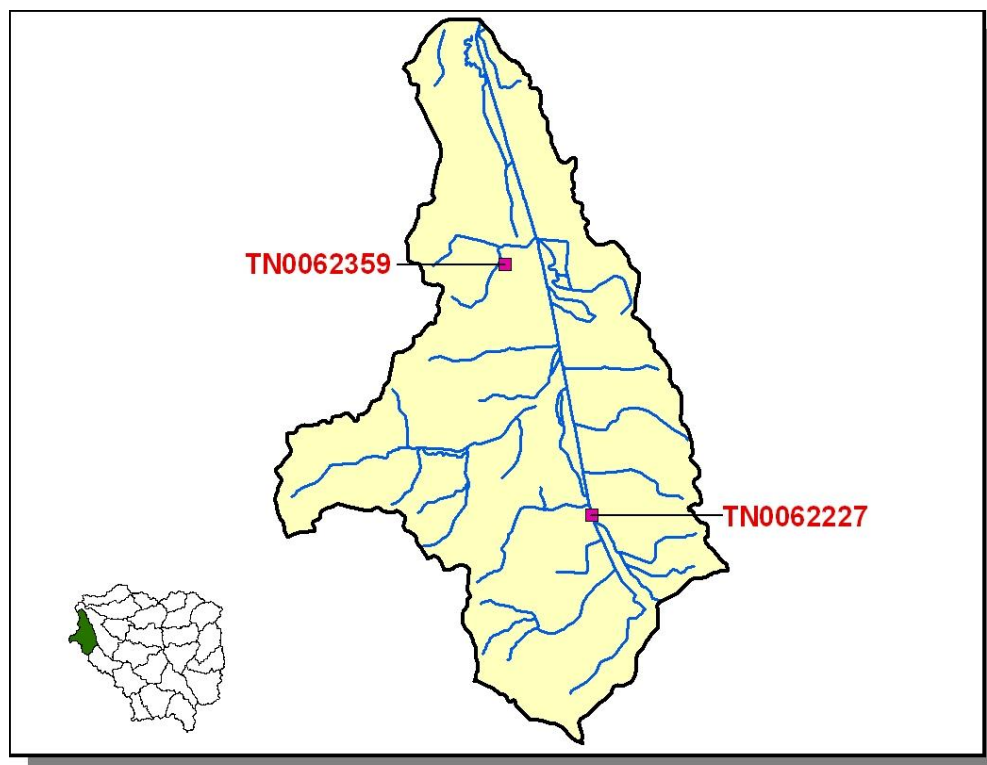


**Figure 4-252. Location of CAFO (Concentrated Animal Feed Operation) Permit Sites in Subwatershed 080102030606.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-253. Location of CGP (Construction General Permit) Sites in Subwatershed 080102030606.** More information is provided in Appendix IV.





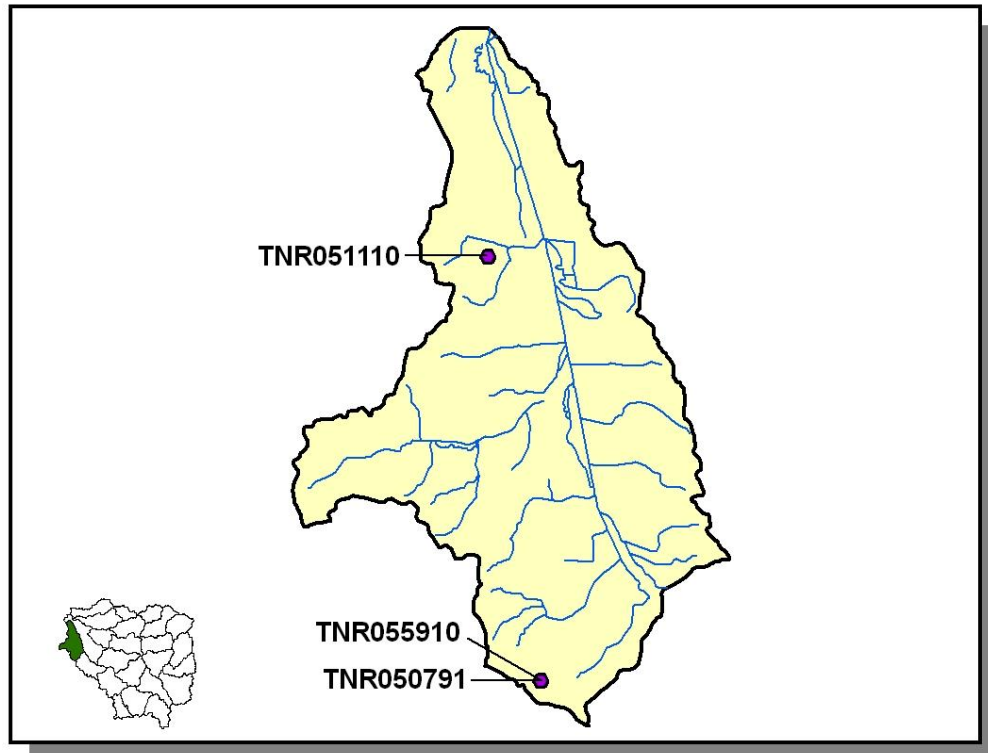
**Figure 4-254. Location of Permitted Municipal and Industrial Facilities in Subwatershed 080102030606.** Permit numbers in red indicate that the facility discharges to a stream listed on the 2006 303(d) list. More information, including the name of the facility is provided in Appendix IV.

PERMIT #	7Q10	DISCHARGE FLOW
TN0062227	9.5	0.36
TN0062359	11.4	0.22

**Table 4-163. Receiving Stream Flow Information Used for Limit Calculations for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030606.** Data are in million gallons per day (MGD). Data were obtained from permit files.

PERMIT #	BOD <sub>5</sub>	BOD % REMOVAL	E. coli	FECAL COLIFORM	DO	TRC	FLOW	pH	TSS	SS
TN0062227	X	X	X	X	X	X		X	X	X
TN0062359	X	X	X		X	X	X	X	X	X

**Table 4-164. Parameters Monitored for Limits for NPDES Dischargers to Waterbodies Listed on the 2006 303(d) List in Subwatershed 080102030606.** BOD<sub>5</sub>, Biochemical Oxygen Demand (5-day); DO, Dissolved Oxygen; TRC, Total Residual Chlorine; TSS, Total Suspended Solids; SS, Settleable Solids.



**Figure 4-255. Location of TMSP (Tennessee Multi Sector Permit) Sites in Subwatershed 080102030606.** More information is provided in Appendix IV.

**4.2.X.iv. Nonpoint Source Contributions.**

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Gibson	9,766	21,779	221	605	7,506	74
Obion	8,033	18,503	118	7	21,149	205

**Table 4-165. Summary of Livestock Count Estimates by County.** According to the 1997 Census of Agriculture (<http://www.agcensus.usda.gov/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Gibson	36.4	36.4	2.0	8.6
Obion	67.6	67.6	4.4	20.8

**Table 4-166. Forest Acreage and Annual Removal Rates (1987-1994) by County.**

CROPS	TONS/ACRE/YEAR
Cotton (Row Crops)	14.60
Corn (Row Crops)	10.03
Wheat (Close Grown Cropland)	9.78
Soybeans (Row Crops)	8.47
Sorghum (Row Crops)	5.55
Other Cropland not Planted	3.68
Other Land in Farms	1.34
Grass Forbs Legumes Mixed (Pastureland)	0.88
Conservation Reserve Program Land	0.80
Grass (Hayland)	0.38
Grass (Pastureland)	0.37
Farmsteads and Ranch Headquarters	0.32
Legume (Pastureland)	0.07

**Table 4-167. Annual Estimated Total Soil Loss in Subwatershed 080102030606.**